RL FY2002 BUDGET FORMULATION

DOE Priority: 1 **PBS #:** RL-WM01 **Unit of Analysis:** 0EM

UAS Title: Maintain Safe & Compliant SNF Storage in K Basins

Benefits Summary

This Unit of Analysis (UAS) provides for all activities and facilities required to directly support the minimum safe operations of the K Basins. The work assures that approximately 2100 metric tons of irradiated metallic uranium fuel, containing millions of curies of radioactive materials, currently stored in aging and deteriorating basins on the banks of the Columbia River, is maintained in as safe a condition as possible until fuel removal operations are completed. The work for minimum safe operations for the Basins after the fuel is removed is carried under UAS OKU (Maintain Safe & Compliant Sludge, Debris & Water in K Basins).

Work Planned in FY2002:

Funding for FY 2002 will provide for continued operation, maintenance and surveillance to ensure that the K Basins remain in a safe and compliant condition. The work scope includes operation of the water treatment, electrical and facility systems, corrective and preventive maintenance, radiation monitoring, waste disposition, safety analysis, and training. This work continues at a constant yearly rate until fuel is removed from the Basins. The work is the minimum required to maintain the Basin in a safe and compliant condition.

Regulatory Drivers

Without the work performed under this UAS, all TPA milestones (M-34 series) leading to SNF Project completion will be jeopardized. Continued operations and maintenance of the K Basins are required to maintain compliance with permits issued under the Clean Air Act which regulate radioactive and toxic component discharges to the air and the National Pollutant Discharge Elimination System (NPDES) for the outfall discharge to the river. Water system operations also maintain compliance with permits and regulations governing the operation of the sanitary and potable water systems. Monitoring and reporting is required to maintain compliance with the Bald Eagle Monitoring Plan negotiated with the U.S. Fish and Wildlife Service. Also, without the work performed under this UAS, commitments in the Implementation Plan for DNFSB Recommendation 94-1, Improved Schedule for Remediation in the Defense Nuclear Facilities Complex, leading to SNF Project completion will be jeopardized.

RL FY2002 BUDGET FORMULATION

DOE Priority: 2 **PBS #:** RL-ER05 **Unit of Analysis:** 009

UAS Title: Min Safe - 100 Area Decontamination & Decommissioning - Surveillance & Maintenance

Benefits Summary

Surveillance and Maintenance of inactive facilities is to ensure that risks to the environment and human health and safety, as posed by radiological and hazardous inventory within the inactive facilities are maintained at prescribed safe levels in a timely and cost-effective manner until the facilities can be fully decommissioned. This program includes the annual surveillance of the reactors and ancillary facilities, routine maintenance actions that are on an as needed basis, and other site-wide procedures that specify physical and security controls. All of these minimize potential industrial and radiological hazards to the site worker and the general public.

The purpose of the S&M activities for contaminated surplus facilities awaiting decommissioning is as follows:
. Ensure adequate containment of contamination
. Provide physical safety and security controls
. Maintain the facilities in a manner that minimizes potential hazards to the workers and public
.Maintain systems/equipment that will be essential for S&M activities in a shutdown mode
. Provide a mechanism for the identification and compliance with applicable environmental, safety, health, and safeguards/security requirements.
This is accomplished by focusing the limited actions on those surplus facilities that have undergone the greatest deterioration. Many of these actions were identified in the risk assessment/corrective maintenance portion of the S&M program. Examples of corrective maintenance include electrical upgrades, fall protection upgrades, and roof repair/replacement.

To date through FY02:
. Surveillance and Maintenance of 9 Surplus Production Reactors and of 100 Area Ancillary Facilities.
. Radiological surveys
. Perform facility maintenance. This includes basic maintenance of structures, maintenance and upgrade of utilitities (re-lamping, instrumentation calibration) and maintenance of physical security structures such as stairs, doors and confined space postings, and routine housekeeping
. Roof repairs as necessary
. S&M ensures protection of the workers, public from deterioration of surplus facilities, environmental intrusion into the surplus facilities, and protection of the environment from the spread of contamination from the facilities.
Incremental By Year:

FY2000: Perform annual surveillance and maintenance activities for 105-C (outside only), H, D, KE/KW, B and N reactors. Note: Responsibility for the 105-F and 105-DR Reactors is assigned to the D&D Project (ER06) through ISS completion. Facility maintenance (this includes basic maintenance of structures, maintenance and upgrade of utilities (i.e. re-lamping). Maintenance of physical security structures, such as stairs, railing, walkways, doors, and minor repair of confinement), routine removal of potentially hazardous substances, routine housekeeping activities at the reactors. This includes miscellaneous debris cleanup , eradication of biological pests and removal of biological concerns. Perform equipment calibration, testing, maintenance, and repair on operating equipment, and perform cold weather protection through facilities. Perform environmental monitoring for the Near Field Monitoring at N Area.

FY2001: Perform annual surveillance and maintenance activities for 105-C (outside only), H, D, KE/KW, B and N reactors. Facility maintenance (this includes basic maintenance of structures, maintenance and upgrade of utilities (i.e. re-lamping). Maintenance of physical security structures, such as stairs, railing, walkways, doors, and minor repair of confinement), routine removal of potentially hazardous substances, routine housekeeping activities at the reactors. This includes miscellaneous debris cleanup, eradication of biological pests and removal of biological concerns. Perform equipment calibration, testing, maintenance, and repair on operating equipment, and perform cold weather protection through facilities. Perform environmental monitoring for the Near Field Monitoring at N Area

FY2002: Perform annual surveillance and maintenance activities for 105-C (outside only), H, D, KE/KW, B and N reactors. Facility maintenance (this includes basic maintenance of structures, maintenance and upgrade of utilities (i.e. re-lamping). Maintenance of physical security structures, such as stairs, railing, walkways, doors, and minor repair of confinement), routine removal of potentially hazardous substances, routine housekeeping activities at the reactors. This includes miscellaneous debris cleanup, eradication of biological pests and removal of biological concerns. Perform equipment calibration, testing, maintenance, and repair on operating equipment, and perform cold weather protection through facilities. Perform environmental monitoring for the Near Field Monitoring at N Area

FY2003: Same as FY2002 (Assumption: Starting in FY2003, aggressive S&M ramp down due to ISS of 105 Reactors)

Reactors).

FY2004: Same as FY2002

FY2005: Same as FY2002

FY2006: Same as FY2002

FY2007: Refer to FY2002 with the following assumptions: 1) 105-D, DR and F will require minimal S&M (outside only) due to ISS; 2) K Basins will transition to ERC for S&M in FY2007; 3) RMAs will be reduced as Reactor ISS is completed.

Regulatory Drivers

Regulatory Compliance: The activities are part of the minimum safe operations and are required by DOE orders.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 3 **PBS #:** RL-ER05 **Unit of Analysis:** 00B

UAS Title: Min Safe - 200 Area Surveillance & Maintenance

Benefits Summary

BENEFITS SUMMARY:

Surveillance and Maintenance of inactive facilities is to ensure that risks to the environment and human health and safety, as posed by radiological and hazardous inventory within the inactive facilities are maintained at prescribed safe levels in a timely and cost-effective manner until the facilities can be fully decommissioned. This program includes the annual surveillance of the facilities, routine maintenance actions that are on an as needed basis, and other site-wide procedures that specify physical and security controls. All of these minimize potential industrial and radiological hazards to the site worker and the general public.

The purpose of the S&M activities for contaminated surplus facilities awaiting decommissioning is as follows:
. Ensure adequate containment of contamination
. Provide physical safety and security controls
. Maintain the facilities in a manner that minimizes potential hazards to the workers and public; Maintain systems/equipment that will be essential for S&M activities
. Provide a mechanism for the identification and compliance with applicable environmental, safety, health, and safeguards/security requirements.

This is accomplished by focusing the limited actions on those surplus facilities that have undergone the greatest deterioration. Many of these actions were identified in the risk assessment/corrective maintenance portion of the S&M program. Examples of corrective maintenance include electrical upgrades, fall protection upgrades, and roof repair/replacement.

WHAT ARE WE BUYING:

To date through FY02:

. Surveillance and Maintenance of 200 Area major and ancillary facilities (includes PUREX A Complex), B Plant (B complex), Strontium Semi works (C Complex, REDOX (S Complex) and U-Plant (U Complex).
. S&M ensures protection of the workers and public from deterioration of surplus facilities, environmental intrusion into the surplus facilities, and protection of the environment from the spread of contamination from the facilities.
. Double and single shell tasks (DST and SST, respectively) located in operable units: 200- PO-3, 200-BP-7, 200-RO-4, 200-TP-5, 200-TP-6 and 200-UP-3 are not part of the ERC Scope of Work.

Incremental By Year:

FY 2000: Perform S&M of facility structures, barriers and postings, perform routine radiological surveillance of facilities and grounds, perform preventative maintenance of system components required to support S&M containment integrity (such as fans, electrical, instrumentation, batteries, re-lamping, emergency lighting, compressors) calibrations of instrumentation that supports surveillance, routine housekeeping activities(tumble weed removal, debris clean up, eradicating biological pests), contamination cleanup/stabilization, perform daily remote monitoring of the system and facility parameters (SAMCONS) at PUREX and the remote monitoring system (RMS) at REDOX and U Plant., perform air effluent stack monitoring and sampling. Periodically inspect waste site barriers and postings, identify and correct potentially hazardous conditions, identify and remove friable asbestos, container management activities (repackaging, removal), and perform cold weather checks for the facilities. Complete stabilization of the Pu Loadout Hood. Begin routine S&M or B Plant.

FY2001: Same as FY2000 with the exception that remediation of the Pu Loadout Hood stabilization.

FY2002: Same as FY2000

FY2003: Same as FY2000

FY2004: Same as FY2000

FY2005: Same as FY2000

FY2006: Same as FY2000

FY 2007: Same as FY2000

Regulatory Drivers

Regulatory Compliance: The activities are part of the minimum safe operations and are required by DOE orders.

Programmatic Driver (Peer Rvw Category): 3

RL FY2002 BUDGET FORMULATION

DOE Priority: 4 **PBS #:** RL-ER05 **Unit of Analysis:** 008

UAS Title: Min Safe 300 Area Decontamination & Decommissioning - Surveillance & Maintenance

Benefits Summary

S&M activities are to ensure that risk to the environment, human health, and safety, as posed by the radiological and hazardous inventory of inactive facilities are maintained at prescribed safe levels in a timely and cost-effective manner until the areas can be fully decommissioned. This includes periodic surveillance, routine maintenance (calibrations/preventative) and implementation of other site-wide procedures that specify physical and security controls and minimize potential industrial and radiological hazards to the worker and general public.

WHAT ARE WE BUYING:

To date through FY02:

. S&M of the 308 and 308-A facilities
. Protection of workers, the public from deterioration of the surplus facilities, environment from intrusion into the surplus facilities and protection from the spread of contaminants from the facilities.

Incremental By Year:

FY 2000: Perform semi annual surveillances of the 308 and 308 building and ground surveillance - Semiannual limited radiological survey, annual comprehensive radiological survey, pre-tour radiological inspection, fire system maintenance, roof surveillance, confined space surveillance and preventative and routine maintenance activities

FY2001: Same as FY2000

FY2002: Same as FY2001 (Assumption: No 300 area facilities are transitioned to ERC during FY00-002 Window).

FY2003: 309 and 300 Area fuel buildings (~30 buildings) to be added to the tasks mentioned in FY2000.

FY2004: Same as FY2000

FY2005: Same as FY2000

FY2006: Same as FY2000

FY 2007: 324/327 facilities to be added to the tasks mentioned in FY2000

Regulatory Drivers

Regulatory Compliance: The activities are part of the minimum safe operations and are required by DOE orders.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 5 **PBS #:** RL-ER05 **Unit of Analysis:** 085

UAS Title: Min Safe - Radiation Area Remedial Action [RARA]

Benefits Summary

Radiation Area Remedial Action (RARA) activities are required to reduce and/or control the radioactive contamination on inactive waste sites at Hanford. Interim corrective actions are employed to stabilize the waste sites and prevent the spread of contamination. This decreases the potential risk to Hanford workers and the public prior to final remediation. Work includes routine inspections, radiological surveys, and RCRA surveillance at inactive waste sites and TSDs. Preventive maintenance activities are performed to sustain compliant conditions and prevent the spread of contamination. Preventive maintenance includes herbicide application for deep rooted vegetation; interim stabilization (such as soil consolidation and covering with clean fill) of inactive outdoor waste sites.

WHAT ARE WE BUYING:

To date through FY02:

. Maintenance & Control of inactive outdoor waste sites and 14 inactive TSD units, over approximately 4,000 acres, that could spread soil and biotic contamination to workers, the public, and the environment.
. Waste site maintenance and stabilization required under RCRA, CERCLA and DOE Orders.
. Preventive maintenance including herbicide applications, interim stabilization of inactive outdoor waste sites.

Incremental By Year:

FY 2000:
Interim stabilizations of the contaminated areas at semi-works (C Complex), REDOX (S- Complex) and the 183 KE/KW Acid Tanks. Perform high priority site walk downs, quarterly surveillances of 16 TSDs, surveillances of the 100/200/600 Areas for animal/vegetation intrusion and herbicide and pesticide application in fall and spring, along with managed selected sites, routine waste site maintenance (re-vegetation areas, load testing of specified underground burial areas, tumbleweed removal and herbicide/pesticide applications in the Fall and Spring).

FY2001:
Interim stabilizations identified through high priority site walkdowns (i.e. PUREX, U plant, B Plant), quarterly surveillances of 14 TSDs (approximately 4, 000 total areas), surveillances of the 100/200/600 Areas for animal/vegetation intrusion and herbicide and pesticide application in fall and spring, along with managed selected sites, routine waste site maintenance (re-vegetation areas, load testing of specified underground burial areas, tumbleweed removal, and herbicide/pesticide applications in the Fall and Spring).

FY2002: Same as FY2001

FY2003: Same as FY2001

FY2004: Same as FY2001

FY2005: Same as FY2001

FY2006: Same as FY2001

FY 2007: Same as FY2001

Regulatory Drivers

Regulatory Compliance: The activities are part of the minimum safe operations and are required by DOE orders. It may also be subject to RCRA compliance at RCRA waste sites and TSDs.

Programmatic Driver (Peer Rvw Category): 4

Interface/Integration Requirements between Projects and Sites: Interim stabilization of sites with the Remedial Action project.

DOE Priority: 6 **PBS #:** RL-ER07 **Unit of Analysis:** 007

UAS Title: Min Safe - Long Term Surveillance & Maintenance

Benefits Summary

The Long Term Surveillance and Maintenance (S&M) is required after completion of waste remediation to ensure post closure compliance with cleanup standards. These activities will be documented in the CERCLA operations and maintenance plan (O&M), which is a TPA primary document, that is approved by the lead regulatory agency. The S&M subproject includes such activities as routine surveys, environmental monitoring, and vegetation management where appropriate. Specific S&M activities will be determined at the time of facility closure, final environmental remediation and/or decommissioning as per the approved O&M Plan or equivalent

The subproject is subdivided into the 100, 200, 300, and 400/600/1100 Area subactivities. The requirements for S&M include the 300 and 1100 Areas, and involve routine inspections of site restoration activities that were conducted to mitigate the impacts of waste site restoration or facility D&D. Any subsequent mitigation efforts requiring additional restoration activities will be conducted under this unit of analysis.

To date through FY02:

Post Remediation Monitoring of the 1100 Area per the close-out of the 1100 NPL Area which is required under CERCLA and RCRA.

Incremental By Year:

FY2000: Perform Post Remediation Monitoring in the 100 area, 300 area and 1100 area (Horn Rapids Landfill and Arid Lands Ecology reserve).

FY2001: Same as FY2000

FY2002: Same as FY2000

FY2003: Same as FY2000

FY2004: Same as FY2000

FY2005: Same as FY2000

FY 2006: Same as FY2000

FY2007: Same as FY2000

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

The activities are part of the minimum safe operations and are required by the TPA and DOE orders. The activities will be conducted per an approval CERCLA O&M plan or RCRA post closure monitoring plan.

Regulatory Compliance: The activities are part of the minimum safe operations and are required by the TPA and DOE orders. The activities will be conducted per an approved CERCLA O&M plan or RCRA post closure monitoring plan.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 7 **PBS #:** RL-ER08 **Unit of Analysis:** 00A

UAS Title: Min Safe - Groundwater Management CERCLA/RCRA Monitoring & Reporting

Benefits Summary

The groundwater monitoring and characterization activities are essential for identifying and tracking radiological and hazardous contaminants in the groundwater beneath the entire Hanford Site. The natural flow of this groundwater is toward the Columbia River. Previous activities at the site have caused contamination of regional aquifers. Characterization is underway and monitoring wells have been installed.

The planned activities for this budget year include continued sampling, analysis, interpretation, and reporting of groundwater conditions. The data will determine if corrective action is necessary to stop the movement of contaminant into the river or whether the contaminants are not moving. All work is to be performed in accordance with all applicable safety, QA engineering, environmental and regulatory requirements. Without continued funding of this project, spread of contamination will not be traced and potential risks to the off site population will not be detected. This UOA also includes seismic and vadose zone monitoring.
To date through FY02:

Sample monitoring wells (1244 Well Trips), laboratory analysis of samples, data input into Hanford Environmental Information System database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, begin development of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone.

Incremental By Year:

FY 2000: Sample monitoring wells, laboratory analysis of samples, data input into Hanford Environmental Information System database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, continue support of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone.

FY2001: Sample monitoring wells, laboratory analysis of samples, data input into Hanford Environmental Information System database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, continue support of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone.

FY2002: Sample monitoring wells, laboratory analysis of samples, data input into Hanford Environmental Information System database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, continue support of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone.

FY2003: Sample monitoring wells, laboratory analysis of samples, data input into Hanford Environmental Information System database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, continue support of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone.

FY2004: Sample monitoring wells, laboratory analysis of samples, data input into Hanford Environmental Information System Database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, continue support of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone.

FY2005: Sample monitoring wells, laboratory analysis of samples, data input into Hanford Environmental Information System Database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, continue support of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone.

FY 2006: Sample monitoring wells, laboratory analysis of samples, data input into Hanford Environmental Information System Database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, continue support of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone

FY 2007: Sample monitoring wells, laboratory analysis of samples, data input into Hanford Environmental Information System Database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, continue support of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone

Regulatory Drivers

Sample monitoring wells (1233 Well Trips), laboratory analysis of samples, data input into Hanford Environmental Information System database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, begin development of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestones.

Regulatory Compliance: Groundwater Management monitoring consists of groundwater, vadose, and seismic monitoring activities, along with the groundwater modeling necessary to support long-term landlord surveillance and maintenance responsibilities at the Hanford Site. These activities are part of the minimum safe operations and are required by the TPA and DOE orders. These Groundwater activities will be conducted to meet regulatory requirements, agreements, and DOE orders.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 8 **PBS #:** RL-ER08 **Unit of Analysis:** 0UQ

UAS Title: Groundwater Management Well Maintenance

Benefits Summary

For Benefits Summary see Unit of Analysis 00A (ER-08)

Regulatory Drivers

For Regulatory Drivers see Unit of Analysis 00A (ER-08)

DOE Priority: 9 **PBS #:** RL-TP02 **Unit of Analysis:** 01F

UAS Title: WESF Essential Safety

Benefits Summary

The Waste Encapsulation and Storage Facility (WESF) provides interim safe storage for approximately 134 million curies of cesium-137 and strontium-90 in 1,936 capsules which are stored underwater in pool cells. This UAS provides required operations and maintenance for managing the capsules, which constitute 30% of the radioactive inventory on the Hanford Site. Operations and maintenance are defined as those operations, maintenance, engineering, surveillances, reporting and support activities required by DOE, State and Federal regulations, and facility permits. The work scope includes those activities necessary to maintain WESF in a condition that ensures worker and public safety, and protects the environment while complying with applicable requirements.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers directly associated with this minimum safe activity.

DOE Priority: 10 **PBS #:** RL-TP04 **Unit of Analysis:** 01K

UAS Title: 300 Area/SNM - Essential Safety

Benefits Summary

Essential Safety activities protect the workers, public and environment from exposure posed by loss of containment and control over approximately 1860 Metric Tons of Special Nuclear Materials (SNM), as well as other radiological, and/or hazardous materials, or other industrial hazards. This effort is comprised of the facility surveillance and maintenance required by law and standard industrial practices to maintain the integrity of facility systems and structures. Activities include; required preventative maintenance and calibrations; repair of failed and malfunctioning equipment; walkdown of safety systems, equipment, and facility grounds (operational surveillance); routine radiological surveys, source checks; facility utilities and assessments; and waste management assessments. This also includes Management and Assessment activities including project direction, management and controls, and environmental, quality and safety oversight for the minimum safe condition (sub-deactivation project specific oversight is included in the sub-project). This also includes OSHA, RCRA and DOE mandated training, facility orientation and facility specific building emergency and response training. This activity also provides safe, secure and compliant storage of nuclear materials until final disposition of the material is accomplished. Funding this work scope also supports the overall project mission to complete deactivation of the 300 Area/SNM Project by the end of FY 2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree Drivers associated with this UAS at this time.

DOE Priority: 11 **PBS #:** RL-TP05 **Unit of Analysis:** 01G

UAS Title: PFP Surveillance & Maintenance (Min Safe)

Benefits Summary

The FY 2002 work scope for this Unit of Analysis (UOA) establishes and maintains the facility within the safety Authorization Basis (AB) and maintains facility compliance with environmental and regulatory laws and regulations. The AB consists of structures, systems and equipment components (SSC) and the operational requirements that are considered to be important to safe operation of the PFP facility. The PFP SSCs that are important to safety, collectively are referred to as the Safety Envelope. Features are discussed implicitly in the various Chapters of the PFP Final Safety Analysis Report (FSAR), particularly in the "Accident Analysis" section of Chapter 9 and explicitly in Operational Safety Requirements (OSRs). Safety Envelope features, if altered or modified, could adversely affect facility safety. These designed systems shall maintain their function, such as confinement, compartmentation, structural integrity, and operate consistent with the concept described in the accident analyses to prevent, detect, mitigate, confine, or stabilize as appropriate. All systems that perform Safety Class 1 and 2 functions shall maintain their designed function as described in the FSAR Chapter 9 analyses. Included in this UOA are the following; maintenance of Analytical Laboratory capabilities; maintenance of the Safety Envelope, environmental compliance surveillance and reporting; procedure development and maintenance; plant specific support; nuclear process/radiation surveillance; project management; ventilation/power surveillance; Safety Envelope evaluation and documentation; emergency planning and drill program; and updating the PFP Final Safety Analysis Report (FSAR), WHC-SD-CD-CP-SAR-021 as needed, but at least on an annual basis.

There are no significant changes between FY 2001 and FY 2002. This UOA provides the function of maintaining a safe and compliant PFP facility thus allowing risk reduction through stabilization activities in other UOAs to be accomplished.

This activity represents the mortgage that will be reduced through implementation of the waste removal, risk reduction, and deactivation sub-projects. As waste removal, risk reduction and deactivation activities are completed this will eliminate the drivers behind Safe and Compliant requirements, therefore reducing the required resources.

Regulatory Drivers

There are no TPA or Consent Decree drivers associated with this UOA in FY 2001 or FY 2002. However, in order to perform stabilization and packaging activities, the PFP must be maintained in a safe, compliant mode. The DNFSB driver is Recommendation 94-01, which requires all plutonium materials at PFP to be stabilized and packaged consistent with DOE-STD-3013-99 by December 2004.

DOE Priority: 12 **PBS #:** RL-TP05 **Unit of Analysis:** 0R2

UAS Title: Maintain Safe and Secure Vaults

Benefits Summary

The PFP Vault complex is operated and maintained to ensure safe and secure storage of Special Nuclear Material (SNM) until final disposition of SNM is executed. Minimum Safe activities protect the public, workers and environment from exposure posed by potential loss of containment and control over nuclear material and industrial hazards associated with PFP Vaults. Minimum safe activities will be conducted over the life of the facility, decreasing in scope, as risks are removed/reduced within the facility. Minimum safe activities in FY 2002 include the following: Operation and Radiological surveillances; Nuclear Material accountability Analytical Laboratory capabilities (NDA); support to SNM Inventories; minor vault modifications and engineering studies/assessments; preventive and corrective maintenance; safety boundary evaluation and documentation; and emergency planning.

There are no significant changes between FY 2001 and FY 2002. This UOA provides the function of maintaining a safe and compliant PFP vault complex thus allowing risk reduction through stabilization activities in other UOAs to be accomplished.

This activity represents the mortgage that will be reduced through implementation of the waste removal, risk reduction, and deactivation sub-projects. As waste removal, risk reduction and deactivation activities are completed this will eliminate the drivers behind vault safeguards and security requirements, therefore reducing the required resources to maintain the vault facilities.

Regulatory Drivers

This UOA supports other UOAs which are associated with DNFSB Recommendation 94-01, which requires all plutonium materials at PFP to be stabilized and packaged consistent with DOE-STD-3013-99 by December 2004. There are no TPA, DNFSB or Consent Decree drivers associated with this activity at this time.

DOE Priority: 13 **PBS #:** RL-TP05 **Unit of Analysis:** 0R3

UAS Title: Maintain Facility Systems and Components

Benefits Summary

The FY 2002 work scope for this Unit of Analysis contains three main components: 1) Maintain PFP operational by performing required system surveillances by Nuclear Chemical Operators, Stationary Operating Engineers (SOE), Radiation Control Technicians and Solid Waste Operators. Providing and maintaining daily operational support for the plastic shop, laundry, mask control and operation of 241-Z and 243-Z facilities. Operation of the Power Control Room by SOEs is required to maintain proper control of the PFP ventilation systems. Maintaining the Conduct of Operations Program is also included. 2) Provides for organizational management and administration of overall Maintenance Program. Maintain facilities, equipment and tools. Conduct preventative and corrective maintenance. 3) Provide Special Projects to maintain the PFP infrastructure such as; roof repairs/replacement, supply fan upgrades, sanitary water system repairs and Constant Air Monitoring system upgrades.

There are no significant changes between FY 2001 and FY 2002. Funding changes are due to infrastructure special project needs; this UOA provides the function of maintaining a safe and compliant PFP facility thus allowing risk reduction through stabilization activities in other UOAs to be accomplished.

This activity represents the mortgage that will be reduced through implementation of the waste removal, risk reduction, and deactivation sub-projects. As waste removal, risk reduction and deactivation activities are completed this will eliminate the drivers behind safe and compliant requirements, therefore reducing the required resources.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this activity at this time. In order to perform stabilization and packaging activities, the PFP must be maintained in a safe, compliant mode. This UOA supports other UOAs which are associated with DNFSB Recommendation 94-01, which requires all plutonium materials at PFP to be stabilized and packaged consistent with DOE-STD-3013-99 by December 2004.

DOE Priority: 14 **PBS #:** RL-TP08 **Unit of Analysis:** 01E

UAS Title: 324 Building Essential Safety

Benefits Summary

Essential Safety activities protect the workers, public and environment from exposure posed by potential loss of containment and control over nuclear material and industrial hazards associated with these facilities. Minimum safe activities will be conducted over the life of the facility, decreasing in scope, as risks are removed/reduced within the facilities. This effort is comprised of the facility surveillance and maintenance required by law and standard industrial practices to maintain the integrity of facility systems and structures. Activities include; required preventative maintenance and calibrations; repair of failed and malfunctioning equipment; walkdown of safety systems, equipment, and facility grounds (operational surveillance); routine radiological surveys, source checks; facility utilities and assessments; and waste management assessments. This also includes Management and Assessment activities including project direction, management and controls, and environmental, quality and safety oversight for the minimum safe condition (sub-deactivation project specific oversight is included in the sub-project). This also includes OSHA, RCRA and DOE mandated training, facility orientation and facility specific building emergency and response training. This activity also provides safe, secure and compliant storage of nuclear materials until final disposition of the material is accomplished.

Although significant nuclear material has been removed based on the progress of B-Cell Clean out activities, the deactivation of facility systems and equipment will have the single greatest impact on the reduction of minimum safe requirements associated with these facilities.

SIGNIFICANT CHANGES FROM FY2001-2002

There are no significant changes between FY 2001 and FY 2002; this UAS provides support for the minimum safe operational requirements for the 324 Facility. The minimum safe requirements will remain constant until sufficient progress can be made in facility deactivation that will allow for the reduction in the requirements.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 15 **PBS #:** RL-TP08 **Unit of Analysis:** 01C

UAS Title: 327 Building Essential Safety

Benefits Summary

Essential Safety activities protect the workers, public and environment from exposure posed by potential loss of containment and control over nuclear material and industrial hazards associated with these facilities. Minimum safe activities will be conducted over the life of the facility, decreasing in scope, as risks are removed/reduced within the facilities. This effort is comprised of the facility surveillance and maintenance required by law and standard industrial practices to maintain the integrity of facility systems and structures. Activities include; required preventative maintenance and calibrations; repair of failed and malfunctioning equipment; walkdown of safety systems, equipment, and facility grounds (operational surveillance); routine radiological surveys, source checks; facility utilities and assessments; and waste management assessments. This also includes Management and Assessment activities including project direction, management and controls, and environmental, quality and safety oversight for the minimum safe condition (sub-deactivation project specific oversight is included in the sub-project). This also includes OSHA, RCRA and DOE mandated training, facility orientation and facility specific building emergency and response training. This activity also provides safe, secure and compliant storage of nuclear materials until final disposition of the material is accomplished.

Although significant material has been removed based on completion of 327 Legacy Fuel removal, removal of the cesium inventory, disposal of a portion of the 327 Legacy Waste Buckets in FY 1998 and FY 1999 and transfer of the Spent Nuclear Fuel Project fuel from the facility, the beginning of facility system and equipment deactivation will not start until FY2004.

SIGNIFICANT CHANGES FROM FY2001-2002

There are no significant changes between FY 2001 and FY 2002; this UAS provides support for the minimum safe operational requirements for the 327 Facility. The minimum safe requirements will remain constant until sufficient progress can be made in facility deactivation that will allow for the reduction in the requirements.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 16 **PBS #:** RL-TP10 **Unit of Analysis:** 01M

UAS Title: 200 Area Deactivation Project Essential Safety

Benefits Summary

Essential Safety activities protect the workers, public and environment from exposure posed by loss of containment and control over radiological, and/or hazardous materials, or other industrial hazards. This effort is comprised of the facility surveillance and maintenance required by law and standard industrial practices to maintain the integrity of facility systems and structures. Activities include; required preventative maintenance and calibrations; repair of failed and malfunctioning equipment; walkdown of safety systems, equipment, and facility grounds (operational surveillance); routine radiological surveys, source checks; facility utilities and assessments; and waste management assessments. This also includes Management and Assessment activities including project direction, management and controls, and environmental, quality and safety oversight for the minimum safe condition (sub-deactivation project specific oversight is included in the sub-project). This also includes OSHA, RCRA and DOE mandated training, facility orientation and facility specific building emergency and response training. Funding this work scope also supports the overall project mission to complete deactivation of the project facilities.

SIGNIFICANT CHANGES FROM FY2001-2002

There is no significant increase in costs between FY 2001-2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 17 **PBS #:** RL-TP14 **Unit of Analysis:** 01L

UAS Title: 300 Area Revitalization - Essential Safety

Benefits Summary

Essential Safety activities protect the workers, public and environment from exposure posed by loss of containment and control over radiological, and/or hazardous materials, or other industrial hazards. This effort is comprised of the facility surveillance and maintenance required by law and standard industrial practices to maintain the integrity of facility systems and structures. Activities include; required preventative maintenance and calibrations; repair of failed and malfunctioning equipment; walkdown of safety systems, equipment, and facility grounds (operational surveillance); routine radiological surveys, source checks; facility utilities and assessments; and waste management assessments. This also includes Management and Assessment activities including project direction, management and controls, and environmental, quality and safety oversight for the minimum safe condition (sub-deactivation project specific oversight is included in the sub-project). This also includes OSHA, RCRA and DOE mandated training, facility orientation and facility specific building emergency and response training. Funding this work scope also supports the overall project mission to complete deactivation of the project facilities.

SIGNIFICANT CHANGES BETWEEN FY2001-2002

Increase in funding between FY 2001-2002 due to additional buildings coming into the project.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 18 **PBS #:** RL-WM03 **Unit of Analysis:** 07K

UAS Title: Solid Waste Storage / Disposal Essential Safety

Benefits Summary

The work scope for this UAS focuses on continued operation of the Solid Waste storage and disposal facilities for FY 2002. This UAS maintains minimum safe facility operations that allows continued compliant interim storage of radioactive mixed and transuranic wastes until disposition; and the disposal of low level and mixed radioactive wastes. This UAS maintains significant waste inventories in a safe configuration. This supports other Hanford projects (River Protection, Spent Nuclear Fuels, River Corridor, Waste Management and Environmental Restoration) and complex wide projects with the required waste services in support of their missions and end points.

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree directly associated to this essential safety activity. This UAS does indirectly provide support to other Hanford UASs with TPA and DNFSB drivers.

DOE Priority: 19 **PBS #:** RL-WM04 **Unit of Analysis:** 07L

UAS Title: Solid Waste Treatment Essential Safety

Benefits Summary

This unit of analysis (UAS) provides for safe, cost effective and environmentally compliant operation, maintenance, and engineering support for the treatment facilities that are part of the Hanford Waste Management Project. These facilities are comprised of the Waste Receiving and Processing (WRAP) Facility, the 2706-T Low-level Decontamination and Treatment Facility, and the T Plant Canyon High-Dose Decontamination Facility. The facilities are maintained in a manner that maximizes their availability to support waste management activities without interruption. Specific activities that are included in this UAS include surveillance, safety program implementation, environmental compliance, radiation control, and supporting engineering and maintenance personnel.

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree directly associated to this essential safety activity. This UAS does indirectly provide support to other Hanford UASs with TPA (M-19 and M-91) and DNFSB drivers

DOE Priority: 20 **PBS #:** RL-WM05 **Unit of Analysis:** 07N

UAS Title: 200 Area Liquid Effluent Facilities [LEF] Essential Safety

Benefits Summary

This UAS provides for safe, cost-effective, and environmentally-compliant operation, maintenance, and engineering support for the 200 Area LWPF (i.e., the 242-A Evaporator, LERF, ETF, and 200 Area TEDF). In FY 2002, the 200 Area LWPF will store, treat, and dispose of liquid effluents from other facilities and site cleanup activities. The hazards managed by these other projects pose significant public, worker, and environmental risks much greater than for operating the 200 Area LWPF. Waste volume reduction support will also be provided to tank waste remediation to eliminate the need to construct additional double-shell tanks and minimize the amount of liquid stored in the tanks. One campaign by the 242-A Evaporator is planned in FY 2002.

Regulatory Drivers

The Tri-Party Agreement established enforceable schedules for liquid effluents to comply with RCRA and WAC 173-303. The DOE has also agreed to adhere to the provisions of the Washington State discharge Permit Program Consent Order No. DE 91NM-177 which lists regulatory milestones to comply with permitting requirements. All the milestones have been completed, with the exception of a continuing milestone (M-26-05) to prepare a biennial tritium treatment technology report. Discharges from the 200 Area LWPF must meet the limits set forth in operating permits (e.g., WAC 173-216 State Waste Discharge Permits for the ETF and 200 Area TEDF). Numerous other Tri-Party Agreement milestones assigned to other projects depend on the availability of liquid effluents services.

DOE Priority: 21 **PBS #:** RL-WM05 **Unit of Analysis:** 1HD

UAS Title: 300 Area Liquid Effluent Facilities (LEF) Essential Safety

Benefits Summary

This unit of analysis provides for safe, cost-effective, and environmentally-compliant operation, maintenance, and engineering support for the 300 Area TEDF, 307 Retention Basins, and 340 Facility. In FY 2002, the Liquid Effluent facilities will store, treat, and dispose of liquid effluents from other facilities and site cleanup activities. The hazards managed by these other projects pose significant public, worker, and environmental risks much greater than for operating the Liquid Effluent facilities.

Significant Changes from FY 2001-2002

There are no significant changes from FY 2001 to FY 2002.

Connectivity from UAS to PBS End Points

Numerous interim and final end point targets assigned to other projects depend on the availability of Liquid Effluent services. This UAS provides for safe, cost-effective, and environmentally-compliant operation, maintenance, and engineering support for the Liquid Effluent facilities. The Liquid Effluent Project itself has no interim or final end point targets.

Regulatory Drivers

The Tri-Party Agreement established enforceable schedules for liquid effluents to comply with RCRA and WAC 173-303. The DOE has also agreed to adhere to the provisions of Consent Order No. DE 91NM-177 which lists regulatory milestones to comply with permitting requirements. All the milestones have been completed. Discharges from the Liquid Effluent facilities must meet the limits set forth in operating permit NPDES for 300 Area TEDF. Numerous other Tri-Party Agreement milestones assigned to other projects depend on the availability of Liquid Effluent services.

DOE Priority: 22 **PBS #:** RL-WM06 **Unit of Analysis:** 07R

UAS Title: Analytical Services Essential Safety

Benefits Summary

The focus of this Unit of Analysis (UAS) is on continued operations of the 222-S high-activity laboratory, operation of the low-activity Waste Sampling and Characterization Facility (WSCF), and maintenance of commercial analytical laboratory contracts. This UAS maintains essential safety laboratory operations such that other Hanford projects (River Protection Project, Spent Nuclear Fuels, Solid Waste, Liquid Effluents, and Environmental Restoration) are provided the required services in support of their missions to restore the river corridor and transition the central plateau.

Significant Changes from FY 2001 - FY 2002:
There are no significant workscope changes.

Connectivity from UAS to PBS endpoints:
This UAS contributes to the accomplishment of the PBS endpoint by providing essential safety laboratory operations to support other Hanford Projects' endpoints.

Regulatory Drivers

There are no TPA, DNFSB, or consent decree requirements fulfilled by this UAS. Esential safety laboratory operations are required in support of other UASs that do support TPA, DNFSB, or consent decree requirements (i.e., River Protection Project and Spent Nuclear Fuel).

Other Drivers:
DOE-RL-96-98, Hanford Analytical Services Quality Requirements Document; DOE-RL-96-92, Hanford Strategic Plan; DOE-WIPP-069, WIPP Waste Acceptance Criteria; ST 4502, State Waste Discharge Permit for the 200 Area TEDF.

DOE Priority: 23 **PBS #:** RL-OT01 **Unit of Analysis:** 02Q

UAS Title: HANFORD ENVIRONMENTAL SURVEILLANCE -- BASE OPERATIONS

Benefits Summary

Funding this essential safety, Base Operation activity in FY 2002 will:
- Trace the spread of Hanford contamination beyond the immediate vicinity of source areas;
- Assess the cumulative effect of numerous releases that are individually within allowable limits;
- Determine the potential risks to site workers and off site populations;
- Provide accurate, daily, site specific forecasts of meteorological conditions required by key Hanford programs (e.g., tank farm operations, drill rig operations, facility operations) to determine when work can be conducted safely and when to take actions to prevent damage from severe weather conditions (freezing, high winds, etc.);
- Support emergency response organizations in controlling fires and in determining contaminant spread during an accidental release from the site. This information is used to direct evacuations of workers and the public and to enhance the safety of emergency response teams;
- Provide baseline environmental data used extensively in waste management and environmental restoration decision-making process by DOE-RL, DOE contractors, regulators, stakeholders, public, and Tribal Nations;
- Provide environmental data used to avoid, or in worst case, support DOE defense in ongoing/future environmental litigation activities;
- Provide environmental baseline data that has been identified as essential for the success of the Groundwater/Vadose Zone Integration Project.

SIGNIFICANT CHANGES FROM FY 2001-2002:
There are no significant changes from FY 2001 to FY 2002.

CONNECTIVITY FROM UAS TO PBS END POINTS:
This workscope directly supports the safe achievement of the end states at Hanford. This UAS provides a core set of essential safety activities that support safe and compliant operations at Hanford, helping to protect the health and safety of workers and the public, and to preserve the environment.

DESCRIPTION:
This Unit of Analysis (UAS) covers the essential safety activities of the Surface Environmental Surveillance Project (SESP) and essential safety Meteorological & Climatological Services (M&CS).

The SESP is a multi-media environmental monitoring program conducted to measure the concentration of radio nuclides and chemical contaminants in the environment (far field) and assess the integrated effects of Hanford derived contaminants on the environment and public. The monitoring program includes sampling air, surface water, sediments, soil, natural vegetation, agricultural products, fish, and wildlife on and off site. In addition, the program measures ambient external radiation levels in the environment. This program coordinates it's efforts closely with the Near Field Monitoring program included in the Effluent Emission Monitoring (EEM) Program Min Safe UAS.

This project also:

- Writes the annual environmental report for the Hanford site.
- Assesses potential for contaminants to move offsite through the air and surface water pathways.
- Develops baseline of environmental data used by site programs to meet NEPA, NESHAPS, and other regulations.

The M&CS activity provided at Hanford includes the Hanford Meteorological Station base operations. These essential safety services include:

- Continuously monitor the synoptic weather patterns to detect adverse weather that might affect the safety to the Hanford site. Forecasts are relied upon by site fire protection staff. The conditional forecasts assist in controlling range fires and controlled burns. Worker safety is substantially enhanced by real time predictions of local wind shifts during fires. During summer months, projects performing field work, especially those requiring protective clothing rely on the meteorological program for heat stress indices to determine the duration for which work can be safely performed. During winter months, wind chill information is provided so that workers can take precautions against extreme cold.

- Operate the Automated Field Operations System (AFOS) and Satellite Imagery Systems to support forecast activities. Site and governmental emergency response personnel rely upon the meteorological program for accurate wind speed and direction information to determine the rate and direction of contaminant spread during an accidental release from the site. This information is used to direct evacuations of site workers and the public, and enhance the safety of emergency response teams. Facility operations relies upon local forecasts of arctic weather outbreaks

safety of emergency response teams. Facility operations relies upon local forecasts of arctic weather outbreaks (severe cold weather) to prepare facilities. Without proper preparation, facilities would be damaged by freezing conditions, resulting in work stoppage until repairs can be made.

- Provide meteorological services (24 hours/day Mon-Fri; 8 hours/day weekends and holidays) which includes forecasting thunderstorms, strong surface winds, icing conditions, and dense fog that can impact Hanford site work. Drill rig operations and some phases of building construction cannot be performed during high winds without substantial risk to workers. Site road maintenance forces rely on forecasts to assist in planning snow removal and sanding during winter storms.

- Provide wind surveillance forecasts for waste management personnel to keep staff advised of conditions that affect waste tank operations. Accurate, daily, site specific forecasts of meteorological conditions are required by tank farm operations to determine when work can be conducted safely.

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

There are no TPA, DNFSB, or Consent Decree drivers directly associated with this activity at this time.

The work scope within this UOA is required by the following:
- Reg Driver Category 1 - Required by a compliance agreement: Tri-Party Agreement milestones (supporting)
- Reg Driver Category 3 - Required by Federal environmental statute or regulation (including permits): Clean Air Act; Clean Water Act; 10 CFR 834; Safe Drinking Water Act (SDWA).
- Reg Driver Category 4 - Required by State or local statute or regulation (including permits): Washington Administrative Code (WAC) 246-247, "Radiation Protection - Air Emissions;" WAC 173-201A, "Water Quality Standards for the Waters of the State of Washington."
- Reg Driver Category 6 - Required by Department of Energy Order - Environment, Safety, and Health (Department of Energy ES&H): DOE Orders 5400.1, 5400.5.

DOE Priority: 24 **PBS #:** RL-OT01 **Unit of Analysis:** 02P

UAS Title: Effluent Emission Monitoring [EEM] Program Min Safe

Benefits Summary

This Unit of Analysis (UAS) provides two vital services to help maintain on-site worker safety and health and off-site public safety and health that will be required at some level throughout the life of the Hanford site which for planning purposes is assumed to be the year 2046.

First, the primary EEM work scope provides Hanford on-site monitoring of liquid and gaseous effluents, and the environment immediately around the Hanford facilities, which may contain radioactive and/or hazardous chemical and biological constituents. Monitoring data is collected, evaluated, and reported to determine the degree of compliance with applicable federal and state laws, regulations and permits; and this data is also collected to assess potential safety and health concerns.

Second, the NESHAP work scope supports development, maintenance, and administration of the Hanford NESHAP Federal Facility Compliance Agreement (FFCA), dated February 7, 1994, for the Hanford site. Compliance activities are performed in accordance with the FFCA. The U.S. DOE, Richland Operations Office (RL) will ensure completion of all milestones and other required activities to achieve compliance with applicable requirements of the 40 Code of Federal Regulations (CFR) 61, Subpart H. These requirements include routine measurement of the sources of radioactive emissions to the air and assessing the offsite impact. These are ongoing responsibilities, therefore, this is an ongoing UAS which provides a single, consistent, and centralized radioactive air emissions expertise for the Hanford Site.

Regulatory Drivers

Effluent and environmental monitoring and reporting is performed to comply with legally required environmental, health, and safety-related regulations. This work scope entails radionuclide and hazardous waste monitoring and reporting. These activities are critical to the entire Hanford Site and the surrounding offsite communities because they monitor exposure to the public, primarily the air pathway. The Clean Air Act, the Clean Water Act, the Washington Administrative Code, and DOE Order 5400.1 require this monitoring and reporting.

The NESHAP work scope supports development, maintenance, and administration of the Hanford NESHAP Federal Facility Compliance Agreement (FFCA), dated February 7, 1994, for the Hanford site. Compliance activities are performed in accordance with the FFCA. The U.S. DOE, Richland Operations Office (RL) will ensure completion of all milestones and other required activities to achieve compliance with applicable requirements of the 40 Code of Federal Regulations (CFR) 61, Subpart H

DOE Priority: 25 **PBS #:** RL-ST01 **Unit of Analysis:** 0MU

UAS Title: PNNL FACILITY SURVEILLANCE & MAINTENANCE BASE OPERATIONS

Benefits Summary

Funding this UAS maintains DOE-EM's 300 Area nuclear facilities assigned to Pacific Northwest National Laboratory (PNNL) in a safe, stable condition for FY 2002. This Base Operations activity covers the essential surveillance and maintenance (S&M) of facilities and essential building systems required for the safe containment of radioactive materials utilized at the Laboratory at Hanford. The facilities are maintained in a manner that maximizes their availability to support science and technology development projects without interruption.

SIGNIFICANT CHANGES FROM FY 2001-2002:
The increase from FY 2001 to FY 2002 is due to the major update to the RPL Safety Analysis Report (SAR).

CONNECTIVITY FROM UAS TO PBS END POINTS:
These essential safety surveillance and maintenance activities contribute to the accomplishment of the PBS endpoint by providing for safe and compliant facility operations at PNNL. Funding this UAS will continue to be required until FY 2030 when the PBS end state--full transition of DOE Cold War legacies currently assigned to PNNL to EM for remediation--will be completed.

DESCRIPTION:
The following essential safety activities are included:

- S&M of the Radiochemical Processing Laboratory (RPL a/k/a 325 Building) (Category II) including its essential building systems that are required for the safe containment of radioactive materials.

- Miscellaneous 300 Area PNNL Lab S&M, which provides for Landlord activities for approximately 35 small or closed DOE laboratories in the 300 Area to maintain minimum safe conditions prior to transfer to EM-60 for decommissioning. The S&M is performed to prevent deterioration of the facilities creating unsafe conditions; and to control health, disease, or physical hazards such as animal or insect infestations, roof and floor failures, weather damage, etc. Radioactive and hazardous wastes that still exist in these facilities will be identified/characterized, collected and prepared for disposition on a priority basis to maintain safe shut down conditions. Additionally, the facilities' fire barriers are maintained. There will be close coordination with the Hanford Transition Projects to assure facilities can be turned over to the deactivation contractor at the earliest possible time. In FY 2001, cost estimates needed for the sale, removal, deactivation, transfer or any other activity necessary to move forward with the transfer or disposal of the excess facilities will be completed. Performance of these tasks will then be initiated within available funding. The focus for the FY 2002 effort will be on the 3731, 3731A, 303J, 331A, 2718-E, and 303C Buildings.

Since the RPL is a research facility, the work conducted in the building is constantly changing according to programmatic needs. Current work at the RPL consists of analytical activities related to radioactive and hazardous waste, nuclear fuel, and other areas associated with the Hanford Site characterization and remediation effort, and medically usable radioisotopes. Work is typically divided among the two hot cell complexes, glove boxes, fume hoods, and laboratory benches, depending on the radioactive or hazardous nature of the work. For example, the RPL Hazardous Waste Treatment Units (HWTUs) receive, store and treat mixed and dangerous waste generated by PNNL programs. The RPL HWTUs consist of two units: the Shielded Analytical Laboratory (SAL) and the Hazardous Waste Treatment Unit (HWTU). The SAL is a hot cell facility that has a dual role as an analytical laboratory and a treatment, storage, and disposal facility (TSDF). The SAL performs tank treatment and bench scale treatment of high dose rate lab waste (2,000 rem/hr capability). The HWTU is a TSDF that contains fume hoods and glove boxes for mixed waste treatment. The HWTU performs bench scale treatment of mixed and dangerous waste from various PNNL programs and also treats transuranic and transuranic-mixed waste by neutralization and stabilization.

Regular surveillance of these radioactive materials including witnessed audits and routine accountability must be performed on an on-going basis. Establishing and maintaining radioactive inventory systems consistent with the building Technical Safety Requirements (TSRs) and Facility Effluent Monitoring Plans (FEMPs) is an element of building S&M activities.

Essential building systems including HVAC filtration equipment, radiation detection instruments, compressed air and water supplies, manipulators, cranes, hot cell windows, and the building engineered safeguards must be routinely tested for proper operation and all needed maintenance or repairs promptly performed. Frequent, scheduled radiological surveys to detect the migration of legacy contamination out of hot cells, fume hoods, glove boxes, truck locks, galleries, manipulator repair and low level waste compaction areas, and building ventilation

boxes, truck locks, galleries, manipulator repair and low level waste compaction areas, and building ventilation systems must be conducted. Any contamination which is detected must be removed in order to assure personnel and the site safety and mandated environmental compliance. In support of programmatic and cleanup activities, routine inspection of packages containing radioactive materials are performed to assure their integrity. Administrative and technical plans and procedures are prepared to ensure that the facility is operated within its design bases. Building staff are trained as required to support safe and effective facility operations.

Surveillance, maintenance, and monitoring of DOE-EM Labs assigned to PNNL are required to assure continued minimum safe conditions for carrying out R&D operations in support of site cleanup. S&M costs are provided by the designated DOE program landlord. The DOE landlord for the RPL is EM.

- The S&M activities performed are only those activities which are required to maintain the safety envelope of the facility and are required to be funded by the DOE landlord (EM) until the facility is decontaminated and decommissioned.
- This S&M is required to be conducted by the facility Landlord (EM) regardless of whether any program work is performed.
- Other S&M activities which are required to support ongoing work are funded from facility overheads and paid for by the programs conducting work within the facility.
- These overhead costs are liquidated to the users of the facility based on the space the work/program occupies.

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

There are no TPA, DNFSB, or Consent Decree drivers directly associated with this activity at this time.

DOE Priority: 26 **PBS #:** RL-TP11 **Unit of Analysis:** 002

UAS Title: Advanced Reactors Transition [ART] Min Safe (Nuclear Energy [NE] Legacies, 309 Bldg)

Benefits Summary

The FY 2002 work scope includes the minimum activities required to support the 309 Building, the 337 High Bay, and the 335 Building in order to protect the public, workers, and environment from exposure as a result of loss of containment and control over radiological and industrial hazards. This scope contains the DOE and other regulatory mandated actions for facility operation, including performance of routine confirmatory sampling of the radioactive exhaust stack emissions from 309 Building per 40 CFR 61, and WAC 246-247. Funding this work scope provides a safe working environment which supports the overall project mission to complete deactivation of the 309 Building/PRTR, the 337 High Bay, and the 335 Building by the end of FY 2005.

SIGNIFICANT CHANGES FROM FY 2001-2002:

An assessment of requirements determined that the efforts of a lead project engineer and supporting safety disciplines is required within this UAS. These were previously budgeted in UAS ID 004, "Nuclear Energy (NE) Legacy Deactivation."

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree requirements associated with this activity. However, by maintaining minimum safe operations, the Nuclear Energy (NE) Legacy Deactivation unit of analysis (UAS ID 004) will be able to perform the work necessary to accomplish the scope of TPA target milestone MX-92-11-T01, Complete Disposition Options for All Hanford Site Non-radioactive Sodium.

DOE Priority: 27 **PBS #:** RL-TP13 **Unit of Analysis:** 02H

UAS Title: Surveillance/Maintenance/ Deactivation/Shutdown

Benefits Summary

This UA provides for the surveillance, maintenance, deactivation, and shutdown of surplus infrastructure facilities and systems no longer needed to support the Hanford Site Mission. This activity includes the minimal effort to surveil, maintain, and deactivate surplus, non-radiologically contaminated facilities and systems, regulated Rail Equipment at the 212R Rail Siding, and waste sites (those sites listed on Waste Information Data System known as WIDS). Currently, the Landlord Project has responsibility to manage and disposition, on a priority basis, approximately 130 WIDS sites (includes legacy septic tanks, wastewater tanks and trenches, fuel tanks, etc.). Another activity in this UAS is the disposition of legacy waste, which includes characterizing, labeling, and dispositioning chemicals and wastes, the cleanup/disposal of associated facilities and remediation of the grounds around these sites. In FY 2002 the following activities are planned:

1. Surveil and maintain approximately 60 surplus infrastructure facilities awaiting final disposition (demolish, excess, or transfer to another entity)
2. Shutdown (place in "cheap-to-keep" status) or isolate utilities for approximately 40 surplus infrastructure facilities for future disposition
3. Surveil and maintain legacy, regulated rail equipment at the 212R Rail Siding
4. Manage approximately 130 WIDS sites for future disposition
5. Disposition approximately 35 WIDS sites to meet regulatory requirements.

SIGNIFICANT CHANGES FROM FY 2001- 2002:

Overall, there is no significant changes in this UA from FY 2001 to 2002.

CONNECTIVITY FROM UAS TO PBS END POINTS:

This UAS contributes to the accomplishment of the PBS end point by maintaining surplus infrastructure facilities and systems in a safe, compliant, and cost effective manner. The activities performed in this UA are the minimum required to assure the overall Site cleanup mission can be accomplished without major impact.

Regulatory Drivers

There are no specific TPA, DNFSB, or Consent Decree associated with this activity at this time. The WIDS sites assigned to this UASare managed in accordance with the TPA processes/procedures.

DOE Priority: 28 **PBS #:** RL-TP13 **Unit of Analysis:** 0X3

UAS Title: Disposition of 272E Facility - Safety Reasons

Benefits Summary

This activity provides for the demolition of surplus, deactivated infrastructure facilities that have deteriorated to the point of becoming a high safety hazard to Site workers. As permanent infrastructure facilities are no longer needed and deactivated, they are placed in the Landlord Project Surveillance and Maintenance (S&M) program for future demolition as Site funding becomes available. Many infrastructure facilities have been deactivated for up to five years and are becoming a significant safety hazard to surrounding occupied facilities. In FY 2002, the partial demolition of the 272E and 2715E facilities are planned to mitigate the immediate safety risks associated with these facilities. Because of funding constraints in FY 2002 this Essential Safety UA will only demolish the buildings to the point of removing the immediate safety risks. The remainder of the demolition of these facilities is included under Other Cleanup UA 2TV, "Disposition of 272E & Other High Risk Facilities (Remove Concrete) - Increment". These facilities are in a heavily congested area of 200 East Area and completing this work is essential to assure workers safety and protect surrounding occupied facilities from damage. The 272E high bay building has deteriorated to a point that flying debris from windstorms is a significant hazard to surrounding facilities personnel that can cause a major injury or death. A portion of the demolition includes mitigation of hazardous materials within surrounding vacant facilities.

SIGNIFICANT CHANGES FROM FY 2001 - 2002:

The increase from FY 2001 to 2002 is due to the first year this activity is funded for demolition of high-risk facilities. This UA will include demolition to a point that the immediate hazards are removed posing significant health and safety risk to Site workers. UA 2TJ under Other Cleanup includes the removal of the concrete foundations and other non-significant hazards associated with these facilities.

CONNECTIVITY FROM UAS TO PBS END POINT:

This UA contributes to the accomplishment of the PBS end point by providing a timely, cost effective demolition of high-risk infrastructure facilities that supports minimum safe operations and protects workers health and safety. The overall goal of this PBS is to provide a safe, environmentally compliant, and cost effective infrastructure to support the Site cleanup mission through 2046.

Regulatory Drivers

There is no TPA, DNFSB, or Consent Decree associated with this activity at this time.

DOE Priority: 29 **PBS #:** RL-TP13 **Unit of Analysis:** 2PE

UAS Title: Emergency Services Equipment

Benefits Summary

This UA provides essential equipment replacements for Emergency Services and Preparedness and other related crosscutting sitewide systems. FY 2002 workscope includes:
(1) Replacement of one Fire Engine Pumper Truck. This will assure Firefighter safety and equipment reliability by replacing a Fire Engine which is beyond the end of its life cycle, costly to maintain, and frequently out of service for repairs.
(2) Replacement of key PNNL Capital Equipment for the Site Personnel Dosimeter Assessment Systems (i.e. Thermoluminescent Dosimeter Reading Equipment). This equipment is vital for DOE to meet accountability standards for nuclear facilities workers and unplanned Site exposures.
SIGNIFICANT CHANGES FROM FY 2001- 2002:
There is a decrease in workscope from FY 2001 to 2002 due to only the most essential Safety items being funded in this UA. In FY 2002 the remaining backlog of equipment replacements is covered under UA 2TK, "Emergency Services Equipment - Incremental". In out years this UA continues to replace the backlog of aging and essential Emergency Services and Preparedness equipment on a priority basis.
CONNECTIVITY FROM UA TO PBS END POINTS:
This UA contributes to the accomplishment of the PBS end point by providing timely, cost effective replacement of vital Infrastructure equipment. The activities performed are required to assure the overall Site cleanup mission can be accomplished without major impact.

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 30 **PBS #:** RL-TP13 **Unit of Analysis:** 2Q0

UAS Title: Replacement of Radio System on the Hanford Site

Benefits Summary

In FY 2002 this UA will replace the backbone portion of the Hanford Site wideband VHF two-way radio system. This capital equipment replacement is required by the National Telecommunications and Information Administration (NTIA) to meet mandated frequency changes by January 1, 2005. This communication system supports public safety functions such as Fire Protection, Security/Patrol, and Safety and Emergency Protection Communication Groups. This mode of communication is essential to maintaining the public safety of the Hanford Site and support of state and local law enforcement offsite. The current system consists of sixteen external and five internal repeater sites, 1,200 base stations and 2,800 portable radios, providing sitewide voice communications coverage on government allocated frequencies using conventional radio repeater infrastructure located on Rattlesnake and Gable mountains. The replacement will require new narrowband VHF licenses and retiring wideband licenses. In FY 2002 this UA will replace the system backbone of repeaters, perform design and licensing functions, and provide associated switching for remote control, redundancy, and supervision of the repeaters. The purchase of the 1,200 base stations and 2,800 portable radios is under an incremental UA 2TL, "Replacement of Radio System on the Hanford Site - Incremental". In FY 2003 and 2004 the Site pagers and Global Positioning system will be replaced under this UA (2Q0).

SIGNIFICANT CHANGES FROM FY 2001- 2002:

This UA is new in FY 2002 and must be funded beginning in FY 2002 and ending in FY 2004 to support federal mandated frequency changes. It has been mandated that completion of this project be January 1, 2005.

CONNECTIVITY FROM UAS TO PBS END POINTS:

This UA contributes to the accomplishment of the PBS end point by providing timely, cost effective replacement of a vital Infrastructure system. The activities performed in this UA are required to assure the overall Site cleanup mission can be accomplished without major impacts.

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 31 **PBS #:** RL-TP13 **Unit of Analysis:** 0MS

UAS Title: Integrated Site Vegetation and Animal Control (ISVAC)

Benefits Summary

An integrated approach is being taken to control the spread of radioactive contamination due to biological transport. The FY 2002 scope includes all the activities associated with management of radioactive and non-radioactive tumbleweeds, industrial and noxious weeds, and control of other biological vectors that spread radioactivity. It also encompasses spraying along roadways and fence lines for fire protection.
CONNECTIVITY FROM UAS TO PBS END POINT:
This UA contributes to the accomplishment of the PBS end point by providing timely, cost effective control of the spread of radioactive contamination due to biological transport. The site wide integration of this activity assures the proper controls are executed to support the overall Site cleanup mission.
SIGNIFICANT CHANGES FROM FY 2001 - 2002:
Overall there are no significant changes in this UA from FY 2001 to 2002. Capital equipment purchases necessary to support the required sitewide vegetation and animal control program are included in FY 2002 UA 2TJ, "Integrated Site Vegetation & Animal Control (ISVAC) - Increment".

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree associated with this activity at this time.

DOE Priority: 33 **PBS #:** RL-WM01 **Unit of Analysis:** 0EN

UAS Title: SNF Management and Integration

Benefits Summary

This UAS provides all planning, management direction, evaluation, and the management system for the SNF Project. It provides the management needed to conduct the mission including policies, procedures, configuration management, and project control and integration.

Work Planned in FY2002:

Funding for FY2002 will provide project and technical management for completion of the readiness review for the authorization to the removal of fuel from the K East Basin. The project will remove fuel from both K Basins during this period. SNF management will be performed for the acquisition of sludge and debris removal systems.

Regulatory Drivers

Without the work performed under this UAS, all TPA milestones (M-34 series) leading to SNF Project completion will be jeopardized.

DOE Priority: 34 **PBS #:** RL-WM01 **Unit of Analysis:** 0EP

UAS Title: Fee (Spent Nuclear Fuel)

Benefits Summary

As a pay for performance contract, this UAS provides these mission areas allocation of PHMC payment to contractors for performance.

Regulatory Drivers

Without the work performed under this UAS, all TPA milestones (M-34 series) leading to SNF Project completion will be jeopardized.

DOE Priority: 35 **PBS #:** RL-WM01 **Unit of Analysis:** 0PA

UAS Title: Laundry (Spent Nuclear Fuel)

Benefits Summary

This UAS supports an assessment that provides laundry service support to the SNF Project facilities. Funding is requested for lifetime of the SNF Project.

Regulatory Drivers

Without the work performed under this UAS, all TPA milestones (M-34 series) leading to SNF Project completion will be jeopardized.

DOE Priority: 36 **PBS #:** RL-WM01 **Unit of Analysis:** 0PB

UAS Title: RL Directed Activities - SNF

Benefits Summary

This UAS provides regulatory support from Ecology and technical support from offsite field experts. This includes technical and safety document review which is required to support accomplishments of negotiated TPA milestones. Funding is requested for lifetime of the SNF Project.

Regulatory Drivers

Without the work performed under this UAS, all TPA milestones (M-34 series) leading to SNF Project completion will be jeopardized.

DOE Priority: 37 **PBS #:** RL-WM01 **Unit of Analysis:** 2KA

UAS Title: Corrective Action Management

Benefits Summary

No narrative data provided.

DOE Priority: 38 **PBS #:** RL-ER05 **Unit of Analysis:** 00V

UAS Title: Nuclear Facility Support

Benefits Summary

This unit of analysis is for the specific support for facilities with the "nuclear facility" designation in the ER S&M program. This includes program support for activities performed in facilities with the "nuclear" classification among inactive facilities. Activities include; supporting activities with an increased focus on configuration control, providing CONOPS support in radiological planning, job preparation and execution, development of approved auditable safety analysis, preliminary hazard classifications screening of remaining non-radiological and non-nuclear facilities, the review and upgrade of S&M procedures associated with the safety authorization basis, enhancements to access control, and revising S&M project procedures.

WHAT ARE WE BUYING:

To date through FY02:

. Program support includes activities performed in facilities with the "nuclear" classification among inactive facilities within the S&M ER project
.
. Support includes developing approved, auditable safety analysis and other nuclear facility specific training, procedures and support.
.
. Screen against existing safety basis documents to minimize long term maintenance costs.
.
. Incorporate Safety Analysis Reports and Auditable Safety Analysis into S&M procedures.
.
. Annual updates of SAR/ASAs.

Incremental By Year:

FY 2000: Support Emergency preparedness drills, screen against existing safety basis documents to minimize long term maintenance costs, incorporate documents to simplify maintenance and updates, USQ support, incorporate SARs/ASAs into S&M procedures. Perform annual SAR/ASAs updates and perform SAR self assessments.

FY2001: Continue to support CONOPS for nuclear facilites, perform annual updates to existing SARs and ASAs, perform SAR self assessments, USQ screening as required

FY2002: Continue to support CONOPS for nuclear facilites, perform annual updates to existing SARs and ASAs, perform SAR self assessments, USQ screening as required

FY2003: Continue to support CONOPS for nuclear facilites, perform annual updates to existing SARs and ASAs, perform SAR self assessments, USQ screening as required

FY2004: Continue to support CONOPS for nuclear facilites, perform annual updates to existing SARs and ASAs, perform SAR self assessments, USQ screening as required

FY2005: Continue to support CONOPS for nuclear facilites, perform annual updates to existing SARs and ASAs, perform SAR self assessments, USQ screening as required

FY2006: Continue to support CONOPS for nuclear facilites, perform annual updates to existing SARs and ASAs, perform SAR self assessments, USQ screening as required

FY 2007: Continue to support CONOPS for nuclear facilites, perform annual updates to existing SARs and ASAs, perform SAR self assessments, USQ screening as required

Regulatory Drivers

DOE will not be in compliance with TPA and DOE orders and subject to fines and penalties within one to three years

Regulatory Compliance: DOE will not be in compliance with TPA and DOE orders and subject to fines and penalties within one to three years.

Programmatic Driver (Peer Rvw Category): 5

DOE Priority: 39 **PBS #:** RL-ER05 **Unit of Analysis:** 00U

UAS Title: ER Facility Transition Support

Benefits Summary

This unit of analysis of facility transition support is to achieve safe, stable, and environmentally sound conditions for each facility that are suitable for an extended time period, and to achieve this objective as quickly and economically as possible. After transition (and pending final facility dismantlement) the facility is kept in a stable condition using a methodical S&M program. Specific criteria for the long-term activities associated with S&M requirements at each inactive facility are developed on a case-by-case basis during the facility transition phase. These criteria are developed through a graded approach and are dependent on facility size, complexity, condition, and hazards present. The required facility condition at turnover into the Environmental Restoration Project is noted and guidance is developed, in cooperation with the facility operations management, regarding the preparation of facility systems and structures for turnover. Each facility condition specified for turnover is verified prior to final facility acceptance. The specified condition is a result of determining acceptance criteria, development of end point criteria, DOE review and approval of the end point criteria, and the verification that the end point criteria has been met. Upon acceptance into the ER Project, the facility will be maintained by the S&M Project until the start of final decommissioning work.

To date through FY02:
Support required to transition facilities (example B-Plant) from EM-60 Deactivation to EM-40 for surveillance and maintenance until final disposition.
The ER support for facility transition activities includes development and verification of end point criteria.

Incremental By Year:

FY2000: Support development and verification of end point criteria for waste sites and surplus facilities as identified by EM-60.
100 Area - Provide endpoint criteria development and verification for miscellaneous facilities currently managed by the BHI facilities program.
200 Area - Support B&WHC in the development and verification of end point criteria for facilities in the 200 area. Potential facilities include: 222-U, 222-T, 242-B/BL, 224-T, 231-Z, 209-E, and the FDNW construction yards south of B Plant
300 Area - Support BWHC in the development of end point criteria for the 340 building complex. Continue verifying end points for the 309 facility and Finished Fuel Storage (FFS) facilities. Continue support for the 300 Area revitalization project and support transition of miscellaneous facilities and waste sites from PNNL.
Transition Planning - 1. Continue support to Spent Fuel Project (K Basin) for future planning related to transition planning in out years. 2. Coordinate transition activities with B&WHC, PNNL, and other site contractors to expedite transition of facilities and waste sites to S/M&T that do not require extensive deactivation. 3. Coordinate with long range planning group to maintain long-range planning for Facility Transition. Review Facilites Transition Instruction (BHI-00961) and revise as appropriate to incorporate lessons learned from PUREX and B Plant transitions.
FY2001: Support development and verification of end point criteria for waste sites and surplus facilities as identified by EM-60.
100 Area - Support transition of reactors from the ISS Project to S&M
200 Area - Support end point development and verification of facilities and waste sites as identified.
300 Area - Continue support of FFS facilities, 309 Facility, and PNNL facilities transition: continue to support 300 Area Revitalization project as required.
Transition Planning - 1. Continue support to Spent Fuel Project (K Basin) for future planning related to transition planning in out years. 2. Coordinate transition activities with B&WHC, PNNL, and other site contractors to expedite transition of facilities and waste sites to S/M&T that do not require extensive deactivation. 3. Coordinate with long range planning group to maintain long-range planning for Facility Transition. Review Facilites Transition Instruction (BHI-00961) and revise as appropriate to incorporate lessons learned from PUREX and B Plant transitions.

FY2002: Support development and verification of end point criteria for waste sites and surplus facilities as identified by EM-60.
100 Area - Support transition of reactors from the ISS Project to S&M
200 Area - Support end point development and verification of facilities and waste sites as identified.
300 Area - Continue support of FFS faciliteies, 309 Facility, and PNNL facilities transition: continue to support 300 Area Revitalization project as required.
Transition Planning - 1. Continue support to Spent Fuel Project (K Basin) for future planning related to transition planning in out years. 2. Coordinate transition activities with B&WHC, PNNL, and other site contractors to expedite transition of facilities and waste sites to S/M&T that do not require extensive deactivation. 3. Coordinate with long range planning group to maintain long-range planning for Facility Transition. Review Facilites Transition Instruction

range planning group to maintain long-range planning for Facility Transition. Review Facilites Transition Instruction (BHI-00961) and revise as appropriate to incorporate lessons learned from PUREX and B Plant transitions.

FY2003: Support development and verification of end point criteria for waste sites and surplus facilities as identified by EM-60.

FY2004: Support development and verification of end point criteria for waste sites and surplus facilities as identified by EM-60.

FY2005: Support development and verification of end point criteria for waste sites and surplus facilities as identified by EM-60.

FY2006: Support development and verification of end point criteria for waste sites and surplus facilities as identified by EM-60.

FY2007: Support development and verification of end point criteria for waste sites and surplus facilities as identified by EM-60.

Regulatory Drivers

This work is governed by DOE and Regulatory Orders.

Regulatory Compliance: DOE will not be in compliance with TPA and DOE orders and subject to fines and penalties within one to three years.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 40 **PBS #:** RL-ER10 **Unit of Analysis:** 00S

UAS Title: ER - Program Management & Support "Base Operations"

Benefits Summary

The Apportioned amount of ER10 - PM&S supporting base operations (See UOA 2T0 for remainder of PM&S Costs)

These functional organization activities are required to support the performance of the individual projects. Functional organizations provide the oversight and integration for quality, safety, engineering, science, management systems, and regulatory support. The assignment of individuals from these functions to support performance of a project is part of the project direct cost and not included. The BHI PM&S activities have been proportionally divided into the three primary Risk Areas: Min Safe, Remedial Actions, and D&D. The UOA assessment and evaluation reflect the primary activities for Min Safe.

The major areas of the Program Management & Support (PM&S) Subproject are:

Project Technical Support (TS):
Technical support which includes Design Engineering, Environmental Technology, Technology Applications, and Field Support maintains the ERC sampling and analysis infrastructure, maintains and operates electronic management systems for Hanford Site environmental data, provides environmental science and regulatory technical support. They provide engineering technical support and guidance for design, Systems Engineering and Nuclear Safety, and coordinate site-wide technical services/activities. They also support the development and demonstrations of new technologies.

Program and Project Support :
Program and Project support includes public involvement and community relations, project procurement, and records and document control.

External Affairs is a centralized function which supports all Environmental Restoration projects and functional organizations with public involvement, employee communication, media relations and governmental affairs services.
External Affairs also provides emergency response support to the Hanford Site. It is considered an essential service for FY2001 and FY2002.

Project Procurement and Property Management provide support to the Project Teams and Functional Departments performing the Environmental Restoration of the Hanford Site by procuring materials, services and subcontracts, and by managing property and equipment resources, in full compliance with the Environmental Restoration Contract. This function is considered an essential service for FY 2001 and FY 2002.

Records and Document Control is a centralized services function which supports all projects and functional organizations. It is considered an essential service for FY2001 and FY2002.
Planning and Controls:
Planning and Controls includes project baseline maintenance, project services, project support, ERC performance measurement, and administration of DOE-Richland Operations Office (RL) work requests.

Quality Environmental Safety & Health (QES&H):
Compliance, Quality, Safety & Health professionals provide technical support to the ERC in the disciplines of integrated safety management, industrial safety, radiation safety, occupational health, chemical safety management, fire protection, industrial hygiene, lessons learned, emergency preparedness, accident investigation, occurrence notification reporting, safeguards and security, environmental compliance, quality services and independent assessments.

To Date through FY02:

Safety, Quality Assurance, Regulatory Compliance, Data Management, Engineering Planning, Project Controls and Public Affairs support for the Environmental Restoration Project. These activities should be considered essential services.

Incremental By Year:

FY2000: Essential services to support the performance of the projects: Safety, Quality Assurance, Regulatory Compliance, Data Management, Engineering Planning, Project Controls and Public Affairs support for the

Compliance, Data Management, Engineering Planning, Project Controls and Public Affairs support for the Environmental Restoration Project. These activities should be considered essential services.

FY2001: See above

FY2002: See above

FY2003: See above

FY2004: See above

FY2005: See above

FY2006: See above

FY 2007: See above

Regulatory Drivers

TPA Drivers: External Affairs provides the services for TPA milestones which require formal public involvement processes. These milestone numbers and description are submitted by each project.
Project Procurement and Property Management are required and necessary to effectively and efficiently support the Environmental Restoration Program, regulatory environmental compliance, and compliance with the following:
Bechtel Hanford, Inc. (BHI) Contract No. DE-AC06-93RL12367
o PART I: SECTION C Description/Specification/Work Statement
o PART I: SECTION H-17 Government-Owned Property and Equipment
o PART II: SECTION I-26 FAR 52.237-2 Protection of Government Buildings, Equipment, and Vegetation (Apr 1984)
o PART II: SECTION I-31 FAR 52.251-2 Interagency Fleet Management System Vehicles and Related Services (Jan 1991)
o PART II: SECTION I-34 Procurement of Construction (Jun 1991)
o PART II: SECTION I-35 Procurement of Architect-Engineering Services
GENERAL CLAUSES:
o FAR 52.203-9 Requirement for Certificate of Procurement Integrity-Modification (Nov 1990)
o FAR 52.219-8 Utilization of Small Business Concerns and Small Disadvantaged Business Concerns (Feb 1990)
o FAR 52.219-9 Small Business and Small Disadvantaged Business Subcontracting Plan (Jan 1991)
o FAR 52.219-13 Utilization of Women-Owned Small Businesses (Aug 1986)
o FAR 52.219-16 Liquidated Damages-Small Business Subcontracting Plan (Aug 1989)
o PART III: SECTION J - ATTACHMENT 6 Subcontracting Plan
o DOE ORDER 1332.1A C-1 Uniform Reporting System
o DOE ORDER 4300.1C C-A Real Property Management
o DOE ORDER 4320.1B C-1 Site Development Planning
o EXECUTIVE ORDER 13101 Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition

Records and Document Control is required to support budgeted clean-up work and comply with the following :
o DOE Order 1324.5B" Records Management Program" which references the following laws and regulations:
- 44USC Chapters 21,29,31 and 36
- 36CFR Chapter XII,
- 41CFR Chapter 201
o TriParty Agreement Article XXXVI - "Retention of Records" which references
- CERCLA Sec. 113(k) requirements

Planning and Controls:
The Program Management and Support Planning and Control's functions support the budgeting and forecasting process by establishing controls and providing documentation to assure project DOE contractual performance requirements are met. The budgeting process consists of detailed planning supporting Detailed Work Plans, which are utilized for execution year monitoring, as well as outyear budget submittal support, estimate preparation, trending variances to the Detailed Work Plan, forecasting at completion costs, and providing an early- warning as to potential cost/schedule variances. Planning and Controls provides a forum for DOE and Bechtel Management to provide corrective action to ERC project variances and mitigate cost/schedule overruns. Without adequate funding, the quality of the budgeting, monitoring, forecasting and reporting process would be detrimentally impacted.

The ERC baseline planning and monitoring are essential to the credibility of the DOE mission to respond to the regulators and stakeholders for meeting strategic initiatives and DOE negotiated requirements for Tri-Party Agreement Milestones. Without funding, preparation and update of the ER Long Range Plan and supporting MYWP documents, timely verification of the success, or lack of success of the ERC program would be jeopardized.

Reduced funding of the Program Management and Support Planning and Controls functions will result in ERC restructuring of the organization with either (1) DOE-RL assuming increased responsibility for activities or (2) significantly reduced PM&S planning and subsequent impacts to Project efficiencies.

Quality Environmental Safety & Health (QS&H):
The technical support provided by QS&H and CQP personnel is required to support: maintaining quality, safety and health programs to achieve regulatory compliance; validation of the Integrated Environmental, Safety and Health Management System (ISMS); revisions of the Chemical Management System (CMS) Requirements Document; reactivation of excess chemical program; offsite visits from EPA/DNFSB; developing and revising the Radiation Protection Plan; conducting Environmental, Safety, Health and Quality assessments and surveillance's of ERC activities; performing vendor/lab audits/surveys; coordinating and supervising the ERC-wide program for the Price Anderson Amendment Act (PAAA), including identification, tracking, trending, corrective actions, and reporting

Anderson Amendment Act (PAAA), including identification, tracking, trending, corrective actions, and reporting PAAA violations; conducting interpretive authority activities for 10CFR830.120 PAAA potential noncompliance; issuance of occurrence notification reports; performing Root Cause analysis for accidents, occurrences, and PAAA non-compliance; developing, maintaining, and overseeing implementation of the Quality Assurance Program to verify compliance with regulatory and contractual requirements; reviewing ERC procedures, plans, and procurement documents for conformance to Quality Program requirements; maintaining and supervising the safeguards and security, industrial hygiene, fire protection, lessons learned, industrial safety and occupational health programs; coordinating the review and update of BHI MA-02, Project Procedures, Section 2.0 Quality, Safety & Health (QSH) and designated procedures in BHI-MA-01, Policies, Organization, and Responsibilities Manual; revising and updating BHI-QA-01, Quality Program Manual; and administer/coordinate the Corrective Action Tracking/Trending program.

Regulatory Compliance: The PM&S activities are required to support compliance activities and directly fund the planning and reporting required by the TPA and DOE orders.

Programmatic Driver (Peer Rvw Category): Multiple

DOE Priority: 41 **PBS #:** RL-ER10 **Unit of Analysis:** 00T

UAS Title: ER - RL Program Management and Support "Base Operations"

Benefits Summary

The Apportioned amount of ER10 - PM&S supporting base operations (See UOA 2SY for remainder of PM&S Costs) Workscope that is outside the breadth of the Environmental Restoration Contractor is directed and funded through the Program Management and Support Activity. RL Program Management and Support includes the following work activities.

o Special studies supporting ER Project requirements

o Site-wide assessments to the ER Project for services provided that are applicable to all Hanford Site programs.

o Benton County Sheriff, INS laundry, and BPA electricity

To date through FY02:

Management and oversight of RL contracts, site-wide assessments, special studies, Benton County Sheriff, USACE direct support, and associated ER Project support for BPA electricity and INS laundry. These activities should be considered essential services.

Incremental By Year:

FY2000: RL Program Management and Support for special studies, site-wide assessments, sheriff, laundry and electricity.

FY2001: See above

FY2002: See above

FY2003: See above

FY2004: See above

FY2005: See above

FY 2006: See above

FY 2007: See above

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

Regulatory Compliance:The PM&S activities are required to support compliance activities and directly fund the planning and reporting required by the TPA and DOE orders.

Programmatic Driver (Peer Rvw Category): Multiple

DOE Priority: 42 **PBS #:** RL-ER10 **Unit of Analysis:** 0CT

UAS Title: RL - Program Management and Support (CERCLA Grant to Ecology)

Benefits Summary

The Apportioned amount of ER10 - PM&S supporting base operations (See UOA 2SZ for remainder of PM&S Costs) Workscope that is outside the breadth of the Environmental Restoration Contractor is directed and funded through RL Program Management and Support. RL Program Management and Support includes several work activities. The CERCLA Grant to Ecology is one of these activities. This work scope is for compliance oversight that covers the following:

o Performing technical reviews of documents
o Observing RL's investigation work
o Reviewing documentation resulting from investigations
o Examining toxicological assessments and ecological and qualitative risk assessments
o Conducting ecological studies (scope, sample, document review)
o Co-reviewing proposed plans
o Confirming adherence to cleanup standards
o Evaluating Columbia River data
o Examining applications for the new technology

To date through FY01:
Compliance oversight is handled through a CERCLA grant with the Washington Department of Ecology. It involves the following:

o Performing technical reviews of documents.
o Observing RL's investigative work.
o Reviewing documentation resulting from investigations.
o Examining toxicological assessments and ecological and qualitative risk assessments.
o Conducting ecological studies (scope, sample, document review).
o Co-reviewing proposed plans.
o Confirming adherence to cleanup standards.
o Evaluating Columbia River data
o Examining applications for new technology.

These activities should be considered essential services.

Incremental By Year:

FY2000: Compliance oversight through a CERCLA grant with Washington Department of Ecology.

FY2001: See above

FY2002: See above

FY2003: See above

FY2004: See above

FY2005: See above

FY2006: See above

FY 2007: See above

Regulatory Drivers

TPA, DNSFB, OR CONSENT DECREE DRIVERS:

Regulatory Compliance: The PM&S activities are required to support compliance activities and directly fund the planning and reporting required by the TPA and DOE orders.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 43 **PBS #:** RL-TP02 **Unit of Analysis:** 0GA

UAS Title: Fee (WESF)

Benefits Summary

As a pay for performance contract, this UAS provides these mission areas allocation of PHMC payment to contractors for performance.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time.

DOE Priority: 44 **PBS #:** RL-TP02 **Unit of Analysis:** 0GH

UAS Title: Steam (WESF)

Benefits Summary

This UAS will provide the steam for heating for this mission area. This will support the maintenance of minimum safe operations.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree requirements fulfilled by this UAS.

DOE Priority: 45 **PBS #:** RL-TP02 **Unit of Analysis:** 2GP

UAS Title: Laundry (WESF)

Benefits Summary

This UAS will provide the laundry services assessment for this mission area in support of the Waste Encapsulation and Storage Facility (WESF).

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree requirements fulfilled by this UAS.

DOE Priority: 46 **PBS #:** RL-TP02 **Unit of Analysis:** 17W

UAS Title: WESF - RL Requirements

Benefits Summary

This unit of analysis provides for updating the SAR for the WESF facility to meet DOE Order 5480.23 requirements.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers directly associated with this essential services activity.

DOE Priority: 47 **PBS #:** RL-TP04 **Unit of Analysis:** 0GB

UAS Title: Fee (300 Area/SNM)

Benefits Summary

As a pay for performance contract, this UAS holds an allocation of the contractors potential fee payment that may be earned in a given fiscal year. The amount of fee held in this UAS may not directly correspond to the assignment of performance goals in the project.

SIGNIFICANT CHANGES FROM FY2001-2002

There are no significant changes from FY 2001 to FY 2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 48 **PBS #:** RL-TP05 **Unit of Analysis:** 0GC

UAS Title: Fee (PFP)

Benefits Summary

As a pay for performance contract, this UOA provides these mission areas allocation of PHMC payment to contractors for performance.

There is no mortgage reduction directly associated with this UOA.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UOA at this time.

DOE Priority: 49 **PBS #:** RL-TP05 **Unit of Analysis:** 0GJ

UAS Title: Steam (PFP)

Benefits Summary

This UOA will provide the steam for heating and for the emergency backup generators for this mission area. This will support the maintenance of minimum safe operations.

This UOA does not result directly in significant mortgage reduction.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree requirements fulfilled by this UOA.

DOE Priority: 50 **PBS #:** RL-TP05 **Unit of Analysis:** 01Y

UAS Title: International Atomic Energy Agency (IAEA) Support

Benefits Summary

As directed by International Agreement, PFP will maintain the safety, security and integrity of the vault(s) assigned to the IAEA and the materials placed under IAEA safeguards control. Assistance will be provided monthly, annually and on an as-required basis, for vault and equipment maintenance and modifications and to assist the IAEA with inventories and assessments.

There are no significant changes in this UOA from FY2001 to FY 2002. The level of support for the IAEA will remain constant until the materials are removed from PFP.

There is no mortgage reduction for this UOA. IAEA safeguards activities will be coordinated with stabilization and deactivation activities, which DO impact mortgage reduction.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this activity at this time. This activity is driven by International Agreement as contained in the Non-Proliferation Treaty.

DOE Priority: 51 **PBS #:** RL-TP08 **Unit of Analysis:** 0GD

UAS Title: Fee (324/327)

Benefits Summary

As a pay for performance contract, this UAS holds an allocation of the contractors potential fee payment that may be earned in a given fiscal year. The amount of fee held in this UAS may not directly correspond to the assignment of performance goals in the project.

SIGNIFICANT CHANGES FROM FY2001-2002

There are no significant changes from FY 2001 to FY 2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 52 **PBS #:** RL-TP08 **Unit of Analysis:** 0GK

UAS Title: Steam (324/327)

Benefits Summary

This UAS will provide the steam for heating for this mission area. This will support the maintenance of minimum safe operations.

SIGNIFICANT CHANGES FROM FY2001-2002

There are no significant changes between FY 2001 and FY 2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 53 **PBS #:** RL-TP10 **Unit of Analysis:** 0GE

UAS Title: Fee (200 Area Deactivation)

Benefits Summary

As a pay for performance contract, this UAS holds an allocation of the contractors potential fee payment that may be earned in a given fiscal year. The amount of fee held in this UAS may not directly correspond to the assignment of performance goals in the project.

SIGNIFICANT CHANGES FROM FY2001-2002

There are no significant changes from FY 2001 to FY 2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 54 **PBS #:** RL-TP12 **Unit of Analysis:** 01H

UAS Title: River Corridor Functional Support

Benefits Summary

Coordinates all business and technical management and oversight portions of the River Corridor Project (RCP). Includes Environmental, Safety, Health and QA oversight; overall Program Integration and control of RCP; Business Integration and centralized control and reporting of all financial and scheduling systems including Multi-Year Work Plan, Project Baseline Summary, P3 Scheduling, Integrated Priority List, and change control oversight and coordination; Technical Integration support to the plants, including procedures development, Systems Engineering coordination, special projects development, and technology development; Operations Integration support to the plants, including Conduct of Operations and Conduct of Maintenance activities; and Procurement services for materials and subcontract administration.

DOE Priority: 56 **PBS #:** RL-TP12 **Unit of Analysis:** 1NQ

UAS Title: Nuclear Materials Stabilization Support

Benefits Summary

Coordinates all business and technical portions of the Nuclear Materials Stabilization (NMS) Project. Includes Environmental, Safety, Health and QA oversight; overall Program Integration and control of NMS; Business Integration and centralized control and reporting of all financial and scheduling systems including Multi-Year Work Plan, Project Baseline Summary, P3 Scheduling, Integrated Priority LIst, and change control oversight and coordination; Technical Integration support to the plants, including procedures development, Systems Engineering coordination, special projects development, and technology development; Nuclear Materials Management site-wide and complex-wide coordination and reporting; and Operations Integration support to the plants, including Conduct of Operations and Conduct of Maintenance activities.

DOE Priority: 57 **PBS #:** RL-TP12 **Unit of Analysis:** 0GF

UAS Title: Fee (River Corridor)

Benefits Summary

As a pay for performance contract, this UAS holds an allocation of the contractors potential fee payment that may be earned in a given fiscal year. The amount of fee held in this UAS may not directly correspond to the assignment of performance goals in the project.

SIGNIFICANT CHANGES FROM FY2001-2002

There are no significant changes from FY 2001 to FY 2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 58 **PBS #:** RL-TP12 **Unit of Analysis:** 1NS

UAS Title: Fee (Nuclear Materials Stabilization)

Benefits Summary

As a pay for performance contract, this UAS provides these mission areas allocation of PHMC payment to contractors for performance.

DOE Priority: 59 **PBS #:** RL-TP12 **Unit of Analysis:** 1NT

UAS Title: Laundry (Nuclear Materials Stabilization)

Benefits Summary

This UAS will provide the laundry for this mission area. This will support the maintenance of minimum safe operations.

DOE Priority: 60 **PBS #:** RL-TP12 **Unit of Analysis:** 0GL

UAS Title: Laundry (River Corridor)

Benefits Summary

This UAS will provide laundry services for this mission area, which supports the maintenance of essential safety deactivation project operations.

SIGNIFICANT CHANGES FROM FY2001-2002

There are no significant changes between FY 2001 and FY 2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 61 **PBS #:** RL-TP14 **Unit of Analysis:** 0GG

UAS Title: Fee (300 Area Revitalization)

Benefits Summary

As a pay for performance contract, this UAS holds an allocation of the contractors potential fee payment that may be earned in a given fiscal year. The amount of fee held in this UAS may not directly correspond to the assignment of performance goals in the project.

SIGNIFICANT CHANGES FROM FY2001-2002

There are no significant changes from FY 2001 to FY 2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree Drivers with this UAS.

DOE Priority: 62 **PBS #:** RL-WM03 **Unit of Analysis:** 07M

UAS Title: Waste Management Project Program Management

Benefits Summary

FY 2002 work scope focuses on the overall planning and integration support for all of the Waste Management Project functions. This UAS includes long range strategic planning and scheduling; business management, financial control, development and preparation of the Multi-Year Work Plan, the Project Baseline Summaries, activity based cost estimates, resource loaded schedules, change control, and monthly financial reporting; updates of technical baseline documents, procurement services, project administration, emergency preparedness enhanced drill programs and EM integration. This directly supports all of the Liquid Effluent and Solid Waste treatment; storage and disposal project activities and allows for the continued operations that support other Hanford projects.

Regulatory Drivers

There is no TPA or Consent Decree directly associated to this minimum safe activity. This UAS provides support for DNFSB Recommendation 94-02 through the maintenance of the Performance Assessment and composite analysis for the 200 East and 200 West Low Level Burial Grounds.

DOE Priority: 63 **PBS #:** RL-WM03 **Unit of Analysis:** 2VA

UAS Title: Analytical Services Program Management

Benefits Summary

FY 2002 work scope focuses on the overall planning and integration support for all Analytical Services functions. This UAS includes strategic planning, business management, financial control, development and preparation of the Multi-Year Work Plan, the Project Baseline Summaries, activity-based cost estimates, resource loaded schedules, change control, and monthly financial reporting; procurement services, and administration. This directly supports all Analytical Services activities and allows for the continued operations that support other Hanford projects.

Significant Changes from FY 2001-2002:
No significant changes to the work scope. Analytical Services Program Management was previously contained in the Waste Management Project. This is a new UAS that begins in FY 2002.

Connectivity from UAS to PBS end points:
This UAS contributes to the accomplishment of the PBS endpoint by providing essential safety laboratory operations to support other Hanford Projects' endpoints.

Regulatory Drivers

There are no TPA, DNFSB, or consent decree requirements fulfilled by this UAS. Note that essential safety laboratory operations are required in support of other UASs that do support these requirements (i.e. River Protection Project and Spent Nuclear Fuel).

DOE Priority: 64 **PBS #:** RL-WM03 **Unit of Analysis:** 0C7

UAS Title: Steam (Waste Management)

Benefits Summary

This UAS will provide the steam assessment for heating to the Waste Management mission area supporting the 242-A evaporator.

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree requirements fulfilled by this UAS.

DOE Priority: 65 **PBS #:** RL-WM03 **Unit of Analysis:** 1PB

UAS Title: Steam (Analytical Services)

Benefits Summary

This unit of analysis provides for steam assessment for heating for the 222-S laboratory, which supports essential safety operations.

Significant Changes from FY 2001 - FY 2002:
No significant changes in work scope. The Analytical Services steam assessment was previously contained in the Waste Management Project Steam UAS 0C7.

Connectivity from UAS to PBS end points:
This UAS contributes to the accomplishment of the PBS endpoint by providing project payment for the steam assessment in support of 222-S analytical services base operations.

Regulatory Drivers

There are no TPA, DNFSB or consent decree requirements fulfilled by this UAS.

DOE Priority: 66 **PBS #:** RL-WM03 **Unit of Analysis:** 100

UAS Title: Laundry (Waste Management)

Benefits Summary

This UAS will provide the laundry services assessment for this mission area including the Solid Waste, Treatment, and Liquid Effluents.

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree requirements fulfilled by this UAS.

DOE Priority: 67 **PBS #:** RL-WM03 **Unit of Analysis:** 1PC

UAS Title: Laundry (Analytical Services)

Benefits Summary

This unit of analysis provides for Laundry services assessment to the 222-S and WSCF laboratories, which supports essential safety operation of the facilities.

Significant Changes from FY 2001 - FY 2002:
No significant changes in workscope. The Analytical Services laundry assessment was previously contained in the Waste Management Project UAS 100. This is a new UAS.

Connectivity from UAS to PBS endpoints:
This UAS contributes to the accomplishment of the PBS endpoint by providing project payment for the site laundry assessment in support of analytical services esential safety operations.

Regulatory Drivers

There are no TPA, DNFSB or consent decree requirements fulfilled by this UAS.

DOE Priority: 68 **PBS #:** RL-WM03 **Unit of Analysis:** 07Q

UAS Title: Fee (Waste Management)

Benefits Summary

As a pay for performance contract, this UAS provides these mission areas allocation of PHMC payment to contractors for performance.

Regulatory Drivers

There is no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time.

DOE Priority: 69 **PBS #:** RL-WM03 **Unit of Analysis:** 07T

UAS Title: LLW & MLLW Disposal Capacity Development

Benefits Summary

FY2002 work scope provides capacity development for the continued disposal of radioactive low level and contamination control activities in the LLBG to reduce resolve subsidence issues, contamination spread and environmental damage. In other years, this UAS provides capacity development for the continued disposal of radioactive low level and mixed wastes; and for the design and placement of closure covers on the mixed waste trenches.

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree directly associated to this UAS. This UAS does indirectly support TPA drivers in other Hanford and offsite UASs through the capacity development for the continued disposal of radioactive low level and mixed wastes.

DOE Priority: 70 **PBS #:** RL-WM03 **Unit of Analysis:** 1PD

UAS Title: Fee (Analytical Services)

Benefits Summary

As a pay for performance contract, this UAS provides for allocation of PHMC payment to contractors for performance.

Significant Changes from FY 2001 - FY 2002:
No significant changes in workscope. The Analytical Services fee was previously contained in the Waste Management Project UAS 07Q. This is a new UAS.

Connectivity from UAS to PBS endpoints:
This UAS contributes to the accomplishment of the PBS endpoint by providing project payment for the fee assessment in support of analytical services operations.

Regulatory Drivers

There are no TPA, DNFSB or consent decree requirements fulfilled by this UAS.

DOE Priority: 71 **PBS #:** RL-WM04 **Unit of Analysis:** 086

UAS Title: Solid Waste Treatment Essential Services

Benefits Summary

This unit of analysis (UAS) provides funding for treatment of mixed to meet land disposal restrictions. Processing activities related to preparing transuranic (TRU) waste for shipment to the Waste Isolation Pilot Plant (WIPP) are also included in this UAS. Facilities within this UAS include the Waste Receiving and Processing (WRAP) Facility, the T Plant Complex, and commercial treatment contracts (TPA M-19 and M-91 requirements). Activities include actual storage and treatment operations and supporting requirements such as engineering, radiation control, and other items. Activities also include maintaining a WIPP certification program, and processing TRU waste for shipment to WIPP. Mixed waste treatment is performed both onsite and offsite. Treatment provided in FY 2002 includes some onsite treatment or direct disposal, the second year of commercial thermal treatment, offsite stabilization treatment, and characterization of mixed waste to provide feed for future thermal treatment commitments. This UAS also provides significant technical input on mixed waste treatment plans and schedules for inclusion in the Annual Land Disposal Restrictions (LDR) Report.

Regulatory Drivers

TPA drivers are M-19, which requires treatment of contact handled MLLW, and M-91, which requires thermal treatment of MLLW. The mixed waste is treated, mostly using commercial treatment contracts, and verified at WRAP and/or T Plant after treatment. Characterization of mixed waste is also required to meet M-91 thermal treatment volumes. Several Federal Facilities Compliance Act (FFCA) site treatment plans for other sites list WRAP, T Plant, and/or the commercial treatment contracts as the locations where their mixed waste will be treated to meet land disposal restrictions. Although these treatment activities will be funded by the offsite generators, they are dependent upon the availability of WRAP, T Plant, and/or the commercial treatment contracts. The LDR Report is required by TPA M-26. There are no DNFSB drivers associated with this UAS at this time.

DOE Priority: 72 **PBS #:** RL-OT01 **Unit of Analysis:** 1UM

UAS Title: HANFORD RESOURCE PROTECTION REG COMPLIANCE - BASE OPERATIONS

Benefits Summary

This UAS covers the essential services activities established to comply with numerous federal laws and regulations concerning the protection and management of ecological and cultural resources on the Hanford Site in FY 2002. Funding this base operations Unit of Analysis (UAS) will:
- Protect endangered species on the Hanford site
- Provide for NEPA compliance in the 100, 200, and 300 Areas
- Protect Hanford archaeological resources
- Provide essential support to Groundwater/Vadose Zone Integration Project
- Provide mechanism through which DOE's stewardship and trustee responsibilities are being fulfilled.

SIGNIFICANT CHANGES FROM FY 2001-2002:
There is no significant change in budget for this UAS from FY 2001 to FY 2002.

CONNECTIVITY FROM UAS TO PBS END POINTS:
This workscope supports achieving the end states established for Hanford in a compliant manner that protects sensitive ecological, cultural, and Native American resources.

DESCRIPTION:
This UAS includes Hanford Ecosystem Management (Ecosystem Monitoring; Ecological Compliance Assessment), and Cultural Resource Management (NHPA 106, AIRFA, and ARPA compliance; RL NEPA compliance support; and RL Cultural Resource Program Office Support).

The primary Hanford Ecosystem Management activities include the following:

Ecosystem Monitoring - evaluates the status of native wildlife species and their habitats and distinguishes changes in status caused by site activities from those caused by natural events. Of particular concern are animals and plants that are listed by federal and state agencies as threatened or endangered. This activity:
- Monitors status and trends of important migrant and resident wildlife species that inhabit terrestrial or aquatic habitats on the Hanford site
- Monitors status and trends of critical wildlife habitat and sensitive vegetation communities on the Hanford site
- Maintains geographical information systems; maps to provide data in a format useful for species protection, site operations, and land use planning.

Ecological Compliance Assessment - performs activities to assure RL that actual and potential impacts of site operations on sensitive ecological resources at Hanford are identified, evaluated, and documented in the manner required by DOE regulations, NEPA and the Endangered Species Act. Baseline ecological data on protected plants, wildlife and habitats are collected during appropriate times of the year in the 100, 200, and 300 Areas outside surface contamination and high radiation zones. After receiving requests for ecological compliance reviews, ecological impacts of the proposed action are determined. This activity provides RL with the information needed to:
- Interact with federal, state and tribal agencies on ecological resource issues
- Evaluate the cumulative impact of all Hanford projects on the ecological resources of the site.

The Hanford site contains many threatened and endangered species of plants and animals. The Fitzner-Eberhard Arid Lands Ecology Reserve (ALE) is a habitat/wildlife reserve and nature research center encompassing 120 square miles of relatively undisturbed shrub-steppe land typical of historic Eastern Washington with a complete functioning ecosystem. The North (Wahluke) Slope encompasses approximately 140 square miles of shrub-steppe habitat. Fifty-one miles of the Columbia River flow through or border on the Hanford site. This stretch of the River offers a unique example of the riverine and riparian ecologies that characterized the Columbia Basin ecosystem before hydroelectric dams were built. This segment of the River contains forty-nine of fifty-one miles of the Hanford Reach, the last unimpounded stretch of the Columbia River. Over one-third of the River's fall chinook salmon spawn here naturally. The River, its banks and its islands provide habitat for several species of endangered or threatened plants and animals.

The Hanford Ecosystem Management provides an efficient and effective mechanism for RL and contractor compliance with federal and state environmental laws and regulations (Endangered Species Act, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, National Environmental Policy Act) and DOE orders during the Hanford site operations. The DOE is required to protect sensitive ecological resources, to consider potential impacts on such resources from DOE activities, and to conduct such activities in a manner that protects the long-term maintenance and enhancement of species listed for protection under the Endangered Species Act

long-term maintenance and enhancement of species listed for protection under the Endangered Species Act.

Specific Cultural Resource Management activities include the following:

- Identify, evaluate, and monitor cultural resources as specified in Section 106 of the National Historic Preservation Act. Surveys and inventories are conducted to locate and record prehistoric, historic, and traditional cultural properties on the Hanford site.
- Collect information on the ethnohistory of the Hanford site for use in compliance with the American Indian Religious Freedom Act and the Native American Graves Protection and Repatriation Act.
- Provide support to RL for Cultural Resources Program Office and NEPA compliance.

The Hanford site contains many archaeological sites, Native American burial sites, and traditional fishing and food gathering sites. Distinctive features of this area include Gable Mountain and Gable Butte and other sites of cultural and religious significance to Native Americans. The Department of Energy has trustee responsibility to protect cultural resources and must comply with the legal requirements under the National Historic Preservation Act, Native American Graves Protection and Repatriation Act, Archeological Resources Protection Act, and American Indian Religious Freedom Act. These laws and regulations require DOE to identify, evaluate, and protect significant (eligible for the National Register of Historic Places) cultural resources under their jurisdiction and to consider the effects of their undertakings on these cultural resources.

The protection of these cultural properties is a multifaceted problem. One of the greatest challenges is protection of Native American properties including grave sites. The Columbia River was an important source of food for Native Americans. As a result, many dwelling, food gathering and grave sites are located along the river. This is also the region where Hanford's reactors, related support structures and disposal sites are located. It is also an area favored for new facility construction. In the process of remediating these sites or planning new construction, consideration must be given to the cultural properties that may be disturbed or destroyed in the process.

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

There are no TPA, DNFSB, or Consent Decree drivers associated with this activity at this time.

This UAS maintains regulatory compliance with:
- Reg Driver Category 3 - Required by Federal environmental statute or regulation (including permits): National Environmental Policy Act; 10 CFR 1021; 36 CFR 79; 36 CFR 800; Clean Water Act; CERCLA; Endangered Species Act; Migratory Bird Treaty Act; Bald and Golden Eagle Protection Act; National Historic Preservation Act (Section 106 and 110); American Indian Religious Freedom Act; Native American Graves Protection and Repatriation Act; Archaeological Resources Protection Act.

DOE Priority: 73 **PBS #:** RL-OT01 **Unit of Analysis:** 02U

UAS Title: Hanford Environmental Management Program - HEMP

Benefits Summary

This UAS implements a structured approach toward achieving environmental compliance. This UAS provides guidance and support across Hanford Site contractors to ensure facilities/programs achieve compliance with environmental requirements and agreements, and this UAS provides RL with a mechanism to coordinate specific environmental activities and cleanup activities between its contractors. These activities include preparing site wide reports to meet CAA, CWA, RCRA, TSCA, and EPCRA requirements, developing NEPA/SEPA documentation, maintaining and managing permits such as RCRA, Stormwater, NPDES, and Air Operating, providing management, oversight, and support to the Tri-Party Agreement between Ecology, EPA and DOE, providing regulator access to the Hanford Site for inspections, and meeting regulator requests for data, reporting environmental releases, coordinating environmental compliance issue resolution, implementing/improving environmental management systems.

Note: SAS has been taken out of this UAS.

Regulatory Drivers

Regulatory drivers for this workscope include CAA, CWA, RCRA, TSCA, EPCRA and NEPA/SEPA. This activity also maintains and manages permits such as RCRA, Stormwater, NPDES, and Air Operating. This activity also provides management, oversight, and support to the Tri-Party Agreement between Ecology, EPA and DOE, provides coordination for regulator access to the Hanford Site for inspections.

DOE Priority: 74 **PBS #:** RL-OT01 **Unit of Analysis:** 02V

UAS Title: Site Planning & Integration (SP&I)

Benefits Summary

Benefits Summary:
This function ensures site-wide operational integration of technical scope, cost, and schedules; coordinates site-wide deployment of a uniform prioritization methodology (Integrated Priority List); provides managerial and technical oversight and analysis and update of strategic and tactical planning in the PBS (Program Baseline Summary) and related products (as Paths to Closure, Risk Management Plan and Integrated Site Baseline Report)..

Funding of this UOA also underwrites activities associated with the development of the Site's technical scope, cost, and schedule baseline and its related change control component. Other work scope contained in this UOA includes monthly reporting of performance (Integrated Planning, Accountability and Budgeting System/ Project Execution Module Report, Environmental Management Performance Report, PHMC status report) against the approved baseline; performance and cost management activities. Chartered with developing, tracking, analyzing, and reporting Site-integrated performance measures and cost savings commitments; and ensuring consistency within PHMC site and DOE policies and procedures. This UOA also covers workscope associated with establishing common standards, processes and procedures for site scheduling.

Significant changes from FY 2001 to FY 2002:
No significant changes from FY 2001 to FY 2002.

Significant Mortgage Reduction Activities:
There is no mortgage reduction associated with this UAS.

TPA, DNFSB and Consent Decree Activities:
There is no TPA or Consent Decree associated with this activity at this time.

DOE Priority: 75 **PBS #:** RL-OT01 **Unit of Analysis:** 02W

UAS Title: Site System Engineering

Benefits Summary

Benefits Summary:
Management System Solutions maintenance and updates: Systems Engineering Management Plan; Configuration Management System, Decision/Risk Management System, Requirements Management System, Site Integration Group, and the Technical Issues Management List.

Hanford Site Integrated Technical Baseline products including: the Site Technical Logic that tracks movement of wastes and materials from their current location to their final disposition; the Hanford Site Contractor Work Breakdown Structure; Technical Sections for the PHMC Multi-Year Work Plans and Project Baseline Summaries; Quarterly Management Review Data; IPABS-IS Technical Data Feeds; and Value Engineering.

Systems Engineering Infrastructure including: Systems Engineering tools (HSTD license, maintenance and operations); Systems Engineering processes and procedures; Systems Engineering Services; Project Systems Engineering Support for HSTD data structure, process, and data, Project Hanford Management System.

Significant Mortgage Reduction Activities:
There is no mortgage reduction directly attributabe to this Unit of Analysis.

Regulatory Drivers

The DNFSB has expressed a considerable level of interest in Site Systems Engineering. Site Systems Engineering was a key component in the DOE response to DNFSB recommendation 92-4.

DOE Priority: 76 **PBS #:** RL-OT01 **Unit of Analysis:** 174

UAS Title: Enviromental Compliance Program Fee

Benefits Summary

This UAS covers the performance fee costs allocated to the ECP.

DOE Priority: 77 **PBS #:** RL-OT01 **Unit of Analysis:** 176

UAS Title: Fee (Site Planning & Integration)

Benefits Summary

Site Planning and Integration Project fee.

DOE Priority: 78 **PBS #:** RL-OT01 **Unit of Analysis:** 177

UAS Title: Fee (Systems Engineering)

Benefits Summary

No narrative data provided.

DOE Priority: 79 **PBS #:** RL-OT01 **Unit of Analysis:** 18L

UAS Title: RL Site Stategy Planning and Management Systems

Benefits Summary

Provides Site-Wide alternative strategies to support the three site outcomes. Includes long-term surveillance and maintenance Path Forward (Stewardship). Aligns the various external requirements to a single guidance to the contractors. Integrates site strategies to optimize ability to complete the site outcomes.

Management Systems development and implementation: Includes the development, training, and updating of the Hanford Management Systems. Management Systems incorporates all federal work into processes that link to both contractors work and external (HQ) requirements. Also includes requirement management disposition and directives management. Allows complete trading and disposition of all site requirements.

Regulatory Drivers

CERCLA Post-Closure Institutional Control; NDAA (National Defense Authorization Act); CFR-Requirements Resource Management (Land Use Reports).

DOE Priority: 80 **PBS #:** RL-OT04 **Unit of Analysis:** 03B

UAS Title: Emergency Preparedness Grants

Benefits Summary

Benefits Summary:
Provides funding to the State of Washington for enhanced emergency preparedness and maintenance of independent oversight. This activity is important as it enhances the safety of local residents in the event of a Hanford related emergency.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time.

DOE Priority: 81 **PBS #:** RL-OT04 **Unit of Analysis:** 03A

UAS Title: State of Oregon Hanford Oversight

Benefits Summary

Benefits Summary:
Provides funding to the State of Oregon for technical oversight, public information and emergency preparedness. This activity is important as it assures Oregon's participation in Hanford related activities. There is no TPA driver for this activity.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time.

DOE Priority: 82 **PBS #:** RL-OT04 **Unit of Analysis:** 039

UAS Title: Payment in Lieu of Taxes (Current Payment)

Benefits Summary

Benefits Sumamry:
This activity makes payment to Benton, Franklin and Grant counties in lieu of taxes for property taken off of the tax roles. PILT Payments are discretionary.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time.

DOE Priority: 83 **PBS #:** RL-OT04 **Unit of Analysis:** 036

UAS Title: Hanford Advisory Board/Miscellaneous Grants

Benefits Summary

Benefits Summary:
This activity covers the costs of ; 1. Funding support for the activities of the Hanford Advisory Board; 2. Funding support for the activities of the Hanford Openness Panel; 3. Other possible miscellaneous grants or studies.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time.

DOE Priority: 84 **PBS #:** RL-OT04 **Unit of Analysis:** 037

UAS Title: National Security Analysis (formerly declassification of documents)

Benefits Summary

Benefits Summary:
This is a Security activity which will be moved to the new SAS organization. This activity funds the declassification of Hanford documents. It is part of a commitment by the Secretary of Energy to make as many of the documents surrounding the production of nuclear materials available to the public as possible. The program is expected to be completed in FY 2004. Each year approximately 240,000 pages of documents are reviewed for possible declassification.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time.

DOE Priority: 85 **PBS #:** RL-OT04 **Unit of Analysis:** 032

UAS Title: Resource Conservation and Recovery Act [RCRA] Mixed Waste Fee

Benefits Summary

Benefits Summary:
This item represents the payment of fees to the Washington Sate Department of Ecology for RCRA Hazardous and/or mixed waste management fees. It is required by the Tri-Party Agreement (Article XXIX), WDOE regulations and State statutes.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time. However, funding of this activity is required under Article XXIX of the Tri-Party Agreement.

DOE Priority: 86 **PBS #:** RL-OT04 **Unit of Analysis:** 031

UAS Title: Department of Health [DOH] Oversight

Benefits Summary

Benefits Summary:
This item represents a grant to the Washington Sate Department of Health for radiation protection - air monitoring, independent oversight and surveillance. It is required by Washington State Statutes (RCW70.98.050) and regulations (Washington State Administrative Code part 246-247).

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time. However, this grant [DE-FG06-92RL12455] funds Washington State Department of Health's environmental oversight program. It is required by Washington State Statutes (RCW70.98.050) and regulations (Washington State Administrative Code part 246-247).

DOE Priority: 87 **PBS #:** RL-OT04 **Unit of Analysis:** 035

UAS Title: Downwinder Litigation

Benefits Summary

Benefits Summary:
This activity pays for the cost for defense in the Downwind litigation court proceedings. It is required by contracts with past Hanford contractors.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time. This activity is required by the provisions of the contracts with former Hanford contractors (DuPont, GE, Westinghouse, etc.)

DOE Priority: 88 **PBS #:** RL-OT04 **Unit of Analysis:** 038

UAS Title: Permits/site support

Benefits Summary

Benefits Sumamry:
This activity provides payment to the State of Washington to cover the expense of their radiation protection - air emissions program. It is required by Washington State regulations. This activity also includes; payment of fees for various permits to State of Washington, Benton County and City of Richland, payment of costs associated with the annual public meetings concerning development of DOE-RL's budget and other similar activities.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time. However, the various permits included within this UAS are required under State and Local laws and regulations. Of particular note the Washington Sate Radioactive Air Emissions monitoring is required by WAC part 246-265.

DOE Priority: 89 **PBS #:** RL-OT04 **Unit of Analysis:** 1GT

UAS Title: Uranium Mass Balance Project (Paducah)

Benefits Summary

The purpose of this activity is to support the Secretary of Energy's request to supply information concerning past production of nuclear materials. This information is needed in response to legal proceedings seeking damages in excess of $10B for worker exposures at the Paducah Gaseous Diffusion plant. The activity includes but is not limited to;

o Document search identification for applicability and review.

o Process descriptions, flowsheets, diagrams, Uranium and Neptunium mass balances and specifications, analytical data, efficiency data, chemical and isotopic characteristics of uranium, separation/decontamination facts.

o Produce a Hanford Site report as it relates to the Paducah lawsuit issue, to be submitted to DOE-HQ by not later than March 30, 2000. (and continue support to HQ until Secretary issues final report in June 30, 2000)

This activity is necessary in order to obtain factual data concerning the above mentioned allegations. As of January, 2000 DOE-RL funding has been designated for the first half of FY 00, with no funds firmly allocated beyond March of 2000. As this activity at RL is part of a continuing national effort, discussions are ongoing as to this DOE wide effort will be funded.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree Drivers for this activity.

DOE Priority: 90 **PBS #:** RL-SI01 **Unit of Analysis:** 0ZD

UAS Title: Security Investigations

Benefits Summary

Benefits Summary:
This activity funds the cost for security investigations for contractor employees. These investigations are required in order to issue clearances to those employees whose work requires a security clearance. It is required by DOE regulations. This UAS covers a limited number of the total investigations required as it is constrained by the previously imposed target funding level.

Risk Reduction:
There is no risk reduction associated with this UAS.

This UAS contributes to achieving all of the Outcomes by funding the security clearances required for site work.

Failure to fund this activity will result in either violation of security requirements or not having properly cleared employees available to perform work which would impede programmatic progress.

Significant Mortgage Reduction Activities:
There is no mortgage reduction directly associated with this UAS.

TPA, DNFSB, or Consent Decree Drivers:
There are no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree Drivers associated with this UAS.

RL FY2002 BUDGET FORMULATION

DOE Priority: 91 **PBS #:** RL-HM01 **Unit of Analysis:** 02F

UAS Title: HAMMER Operations

Benefits Summary

This UAS provides funding for the HAMMER Program. The primary mission of the HAMMER Program is to host, broker and provide regulatory-required health and safety training to the Hanford Site, involving hands-on use of realistic props and settings, in order to save lives, reduce injuries and increase worker productivity. Worker safety is the #1 priority onsite and HAMMER is an integral part of achieving this priority.

Thousands of workers are exposed to the risks of handling hazardous material and wastes, responding to emergencies, and environmental restoration activities. Protecting workers from lost-time injuries or longer-term work-related health effects cannot be accomplished by engineering safety controls alone. HAMMER's hands-on training is the most effective method to satisfy these knowledge, skill and ability (KSA) requirements. Hands-on performance based training is proven to sharply increase the retention of KSA during training. The workers need systematic training appropriate to their tasks and associated risks. Workers and emergency responders are trained to recognize and respond appropriately to anticipated and unanticipated hazards in simulated work environments.

FY 2002 workscope focuses on conducting training in specific areas titled Product Lines. The Product Lines are Environmental and Waste Management, Emergency Operations, Fire Operations, Occupational Safety and Health, Technology Supported Learning, Transportation, Technology and Law Enforcement. Further workscope, which ensures a successful training operation at HAMMER, includes:

- Conduct of Training & Learning Services - ensures quality control and continuous improvement evaluations, maximizes hands-on training using various props and simulations. Included is the Learning Resource Center, which also houses the Safety Resource Center and plays an integral role in the safety and training needs of the Hanford Site.

- Operations & Maintenance - required for safe and professional operations of training equipment and props, maintenance of facilities and training support services in a safe and cost efficient manner. This includes but is not limited to resource scheduling, safety and health oversight, engineering, environmental oversight, facility enhancement (project) management and training coordination.

- Business Management - includes budget planning, financial and contract administration, project management, performance measurement, financial analysis and financial policy development.

Significant Changes from FY 2001 - FY 2002
There are no significant changes, the decrease is due to a reduction (from 20.5% to 10.2%) in the FDH Company Level Planning rates.

Connectivity from UAS to PBS end points
This UAS contributes to the accomplishment of the PBS endpoint by providing the regulatory-required health and safety training to the Hanford Site.

Regulatory Drivers

There is no TPA or Consent Decree associated with this UAS at this time.

The primary drivers for HAMMER that clearly define the requirements for worker health and safety, emergency response, environmental/waste management and emergency preparedness training, to name a few:
- 40 CFR 264.16 - mandates training requirements for personnel that work in Hazardous Waste Treatment, Storage and Disposal facilities.
- 40 CFR-270.14 (b) (12) - requires employer outlines of training programs and compliance with 264.16 in the RCRA Application Part B.
- 40-CFR 300.150 - CERCLA Worker helath & safety training.
- 40 CFR 125 - Environmental Training
- 29 CFR 1910
- 29 CFR 1926
- WAC 173.303
- SARA
- Other federal and state regulations

DOE Priority: 92 **PBS #:** RL-HM01 **Unit of Analysis:** 0E1

UAS Title: Fee (HAMMER)

Benefits Summary

Benefits Summary:
As a pay for performance contract, this UAS provides this mission areas allocation of PHMC payment to contractors for performance.

Regulatory Drivers

There is no TPA or Consent Decree associated with this UAS at this time.

DOE Priority: 93 **PBS #:** RL-RG01 **Unit of Analysis:** 030

UAS Title: Regulatory Unit

Benefits Summary

The Office of Safety Regulation of the TWRS-P Contractor (Regulatory Unit), in FY 2002, is focused on both the radiological, nuclear, and process safety (RNPS) regulation and the industrial health and safety (IH&S) regulation of the TWRS-P Contractor's construction activity. The TWRS-P Contractor will have been awarded their Construction Authorization Agreement and Privatization will have moved into Phase I, Part B-2. This authorization agreement will enable Hanford to continue its TWRS-P work, with the ultimate goal of treatment and immobilization of the high-level and low activity tank wastes. The Regulatory Unit, through the execution of a comprehensive inspection program, will manage the safety oversight of the TWRS-P Contractor.

Regulatory Drivers

This activity is in direct support of TPA milestones M-51 and M-60, which pertain to the complete vitrification of Hanford's low activity and high-level tank waste. In addition, the authority for the activity is found in DOE/RL-96-25, Policy for Radiological Nuclear, and Process Safety Regulation of TWRS Privatization Contractors. Because neither the State or Federal OSHA asserted regulatory jurisdiction, the Assistant Secretary for Environmental Management (ASEM) has given the Regulatory Unit the added responsiblity as Occupational Safety & Health (OS&H) regulator for the TWRS-P Contractor.

DOE Priority: 94 **PBS #:** RL-ST01 **Unit of Analysis:** 03F

UAS Title: PNNL WASTE OPERATIONS & MANAGEMENT -- CURRENT GENERATION

Benefits Summary

The scope of this UAS encompasses Waste Management Operations and Effluent Management for the Pacific Northwest National Laboratory (PNNL) activities at Hanford in FY 2002. Funding this UAS provides:
- The waste management infrastructure to manage the disposal of DOE's solid wastes that are currently-generated at PNNL
- Support necessary to manage DOE's liquid and air effluents at PNNL to meet compliance and effluent discharge system operating requirements, and control risks from unregulated effluents.

SIGNIFICANT CHANGES FROM FY 2001-2002:
The increase from FY 2001 to FY 2002 is due to the potential end of the waste re-engineering pilot program for transferring accountability and financial responsibility of producing wastes to the generator program.

CONNECTIVITY FROM UAS TO PBS END POINTS:
These essential services contribute to the accomplishment of the PBS endpoint by providing compliant waste management operations at PNNL. Funding this UAS will continue to be required until FY 2030 when the PBS end state--full transition of DOE Cold War legacies currently assigned to PNNL to EM for remediation--will be completed.

DESCRIPTION:

This program maintains an infrastructure capability that manages the consolidation, packaging, and transportation of currently generated DOE solid wastes at PNNL for treatment and disposal. This task supports the compliant management of DOE air and liquid effluents and all types of solid waste generated as a result of conducting project work at DOE's PNNL facilities. Foremost, this task is structured to ensure that no new legacy waste inventories are generated.

The scope includes the following:

- Waste Management Operations -- provides the waste management infrastructure to manage the disposal of currently generated wastes at PNNL. This activity includes all operational activities (acceptance, handling, storage, packaging, and shipment) needed for dispositioning PNNL's hazardous and radiological wastes. Disposal is included for hazardous wastes but not for radiological and mixed wastes (which is funded by the generators). The average annual waste volumes are: 283 cubic meters LLW; 34 cubic meters of MLLW; 7 cubic meters of TRU, and 50 metric tons of HAZ.

- Effluent Management -- provides the leadership and support necessary to manage liquid and air effluents in a manner to meet compliance and effluent discharge system operating requirements, control risks from unregulated effluents, and maximize PNNL research capability, flexibility, and cost competitiveness.

Regulatory Drivers

The work scope within this UAS is required by the following: Tri-Party Agreement milestone M-92-00 (supporting); Federal environmental statute or regulation (including permits): RCRA (40 CFR 260-281): Hanford Facility RCRA permit WA 7890008967: NESHAPS (40 CFR 61): NPDES (40 CFR 122): Clean Air Act (42 USC 7401): Atomic Energy Act of 1954 (68 Statute 919): Air Operating Permit (40 CFR 70): draft 10 CFR 834: DOT (49 CFR): TSCA (40 CFR 761); and State or local statute or regulation (including permits): Washington Administrative Code (WAC) 173-303, -220, -210A, -400, -401, -460: WAC 246-247: Richland City Ordinance 35-85.

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

The TPA drivers are support to the M-92 series concerning disposition of all 300 Area special case wastes. There are no DNFSB or other Consent Decree drivers associated with this activity at this time.

DOE Priority: 95 **PBS #:** RL-ST01 **Unit of Analysis:** 03E

UAS Title: PNNL COMPLIANCE OVERSIGHT AND SUPPORT

Benefits Summary

Funding this UAS provides the operational compliance and technical services task to ensure that PNNL and its DOE facilities meet regulatory requirements including environment, safety and health regulations and that PNNL's operations are integrated into DOE's sitewide operating permits. Also, this UAS provides for the management and integration of PNNL's Waste Management and Operational Compliance program in accordance with EM planning requirements for the Hanford Site. These infrastructure capabilities are funded by EM to ensure that PNNL is responsive to waste management regulations and to ensure the support of PNNL for the Hanford cleanup mission. This collaborative effort between contractors, in accordance with EM standards, ensures economies of scale are realized on site-wide issues and eliminates redundant and potentially conflicting approaches by various site contractors.

SIGNIFICANT CHANGES FROM FY 2001-2002:

There are no significant changes in this UAS from FY 2001 to FY 2002.

CONNECTIVITY FROM UAS TO PBS END POINTS:

These essential services contribute to the accomplishment of the PBS endpoint by providing for compliant operations at PNNL. Funding this UAS will continue to be required until FY 2030 when the PBS end state--full transition of DOE Cold War legacies currently assigned to PNNL to EM for remediation--will be completed.

DESCRIPTION:

The major tasks include Environmental Compliance Technical Support Services and Program Management of the PNNL Waste Management and Operational Compliance Program.

The Environmental Compliance Technical Support Services activities encompass:
- providing technical support services to identify, interpret, and implement federal and state RCRA (and CERCLA) requirements for radioactive and/or hazardous wastes
- reviewing and assisting in the preparation of NEPA documentation
- providing pollution prevention planning and progress reporting to comply with RCRA regulations (40 CFR 260, et seq.), the Pollution Prevention Act, and Washington Administrative Code (WAC) 173-307
- inspecting, assessing, and reporting the level of compliance of the tank system used to collect liquid radioactive mixed waste from DOE-EM hot cell operations in the 300 Area in accordance with federal and state dangerous Waste Regulations, 40 CFR 264.190 and WAC 173-303-640
- managing toxic substances permit applications and ensuring compliance with regulations
- providing the primary point of contact and milestone management for the Tri-Party Agreement Major Milestones M-92-12 through M-92-16 as they relate to Special Case Waste disposition from DOE facilities assigned to PNNL in the 300 Area.

The Program Management activities encompass:
- Program Integration including general management and strategic business analysis functions for establishing priorities that ensure the DOE's Hanford site mission is successfully achieved
- Program Planning, Reporting/Control including coordination and development of PNNL's EM-30 budget formulation submittals (Project Baseline Summaries, Units of Analyses, Program and Integrated Priority List items, and Multi-year Work Plan), and the preparation and execution of Project Documentation Packages including project controls, change management, time phased budget maintenance, and milestone administration, support to Hanford Site Integrated Schedule (HSIS) and PNNL's participation in Hanford's Site Management System, and EM-30 input to the DOE Progress Tracking System (PTS).

Regulatory Drivers

The work scope within this UAS is required by the following: Tri-Party Agreement milestone M-92 series (supporting); Federal environmental statute or regulation (including permits): NEPA (10 CFR 1021; 42 USC 4321); RCRA (40 CFR); Pollution Prevention Act (42 USC 1310 et. seq.); Clean Air Act; Clean Water Act; TSCA (40 CFR 700 et seq.; 15 USC 2601); FIFRA (7 USC 136 et seq.); 10 CFR 834; EPCRA (42 USC 116); PCB FFCA; Hanford Facility RCRA Permit; CERCLA (26 USC 4611 et seq.); State or local statute or regulation (including permits): and Washington Administrative Code (WAC) 173-303; WAC 173-307; 173-360.

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

The TPA drivers are support to the M-92 series concerning disposition of all 300 Area special case wastes. There are no DNFSB or other Consent Decree drivers associated with this activity at this time.

DOE Priority: 96 **PBS #:** RL-ST01 **Unit of Analysis:** 03G

UAS Title: PNNL WASTE OPERATIONS & MANAGEMENT - LEGACY WASTE

Benefits Summary

Funding this UAS in FY 2002 provides continuing management and disposal of EM's legacy waste mortgage at DOE facilities and ground contamination sites assigned to Pacific Northwest National Laboratory (PNNL). The wastes being managed under this Legacy Waste UAS were abandoned in place and their program sponsors no longer exist. These legacy wastes are the responsibility of EM to manage in accordance with the cleanup of the Hanford site. PNNL has been assigned the responsibility to manage wastes within certain DOE facilities and ground contamination sites and to resolve complex environmental and waste management issues. This UAS directly supports the DOE-EM mission for Hanford Site cleanup and the end state for remediation of all EM legacy waste and contamination vulnerabilities and revitalization of the 300 Area. Approximately 3 cubic meters of TRU waste, 7 cubic meters of MLLW, and 10 cubic meters of LLW would be dispositioned during the fiscal year.

SIGNIFICANT CHANGES FROM FY 2001-2002:
The funding changes from FY 2001 to FY 2002 are due to the varied scope of assorted legacy waste cleanup projects that have been identified and prioritized for completion as funds are made available in accordance with Site priorities.

CONNECTIVITY FROM UAS TO PBS END POINTS:
This UAS is critical to the accomplishment of the PBS endpoint -- full transition of DOE Cold War legacies currently assigned to PNNL to EM for remediation -- by actual disposition of legacies at PNNL.

DESCRIPTION:

The scope of this project in FY 2002 includes the following:
--provide required surveillance and maintenance for existing legacy wastes and materials including assigned ground contamination sites.
--remove contaminated equipment, fume hoods, and ductwork to reduce radiological posting to a minimum level in the 6652H Building. There is a potential for spread of contamination from small rodents that are nesting in the contaminated fume hoods.
--remove ground contamination from the AEC Bus Lot (safety risk).

Regulatory Drivers

The work scope within this UAS is required by the following: Tri-Party Agreement milestone M-92-12 and M-92-13 (supporting); Federal environmental statute or regulation (including permits): RCRA (40 CFR 260-270); Hanford Facility RCRA permit WA 7890008967; NESHAPS; DOT (49 CFR); TSCA; and State or local statute or regulation (including permits): Washington Administrative Code (WAC) 173-303.

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

The TPA drivers are M-92-12 and M-92-13 concerning disposition of all 300 Area special case wastes. There are no DNFSB or other Consent Decree drivers associated with this activity at this time.

DOE Priority: 97 **PBS #:** RL-TP11 **Unit of Analysis:** 0E0

UAS Title: Steam (Advanced Reactor)

Benefits Summary

This UAS will provide the steam used for heating in this mission area. This will support the maintenance of minimum safe operations in the 337 High Bay.

SIGNIFICANT CHANGES FROM FY 2001-2002:

There are no significant changes in this UAS.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers fulfilled by this UAS. However, by maintaining safe operations in the 337 High Bay, the Nuclear Energy (NE) Legacy Deactivation unit of analysis (UAS ID 004) will be able to perform the work necessary to accomplish the scope of TPA target milestone MX-92-11-T01, Complete Disposition Options for All Hanford Site Non-radioactive Sodium.

DOE Priority: 98 **PBS #:** RL-TP11 **Unit of Analysis:** 0BX

UAS Title: Fee (Advanced Reactor)

Benefits Summary

The Project Hanford Management Contract (PHMC) is a pay for performance contract. This UAS provides the mission area's allocation of PHMC payment to contractors for performance.

SIGNIFICANT CHANGES FROM FY 2001-2002:

There are no significant changes between 2001 and 2002.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers fulfilled by this UAS.

DOE Priority: 99 **PBS #:** RL-TP13 **Unit of Analysis:** 0C6

UAS Title: Water Utility Projects and Replacements

Benefits Summary

This UA provides the timely and cost effective major maintenance, renovation, modernization, and upgrade of the Hanford Site Water Systems. In FY 2002, the major emphasis will be continuation of projects that reduces the backlog of Water Projects. Water leaks are occurring at an accelerating rate in the outer area water system serving the 200 Area due to the age of this system (majority of system is 50 years old). They are occurring in lines that run through contaminated areas, which is causing the accelerated migration of contaminates through the Vadose Zone to the ground water and ultimately the Columbia River. The Landlord Project has been working with the Hanford Site Groundwater/Vadose Zone Integration Project since FY 1999 to develop a priority list of water projects. These projects are being planned on a priority basis to replace aging water lines and equipment that minimizes the migration of contaminates in the Vadose Zone and renovates the Hanford Water Systems to meet Site mission needs to 2046 (current End Point of Site Mission). The backlog of water system projects requires incremental funding between FY 2000 and 2006 to address these issues. Therefore, in FY 2002 UAS 2TP, "Water Utility Projects and Replacements - Incremental" has been created for additional water projects not in the target case, but are vital to the Site cleanup mission. The following FY 2002 water projects are planned:

1. Project L-310, "24-Inch Distribution Water Line", construction from 2901-Y valve house to the 200 West Area, will install a parallel line to an existing, half-century old, water line enabling the older line to be retired to standby mode.
2. Project L-324, "Replace Export Water Lines", preliminary engineering study will be conducted to assess the condition and evaluate proper methods for replacing or relining approximately 25 miles of half-century old export water lines.

SIGNIFICANT CHANGES FROM FY 2001-2002:

The increase from FY 2001 to 2002 is due to the backlog of Water projects that are planned on a priority basis. Infrastructure needs and requirements are continuing to increase due to the aging infrastructure and prior year funding support has not keep pace with these needs. Therefore, in FY 2002 UAS2TP, "Water Utility Projects and Replacements - Incremental" has been created for additional water projects not in the target case, but are vital to the Site cleanup mission.

CONNECTIVITY FROM UAS TO PBS END POINTS:

This UA contributes to the accomplishment of the PBS end point by providing timely renovation, modernization, upgrades, and replacements to essential Water Systems, thereby extending the life cycle of these systems in support of the Site mission. The overall goal of this PBS, supported by this UA, is to provide a safe, environmentally compliant, and cost effective infrastructure to support the Site cleanup mission.

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 100 **PBS #:** RL-TP13 **Unit of Analysis:** 2SD

UAS Title: Sanitary Sewer Projects and Replacements

Benefits Summary

In this UA, the following Sanitary Sewer project is planned in FY 2002 to replace an undersized system in the 200 West Area that supports the PFP cleanup mission:
Project L-338, "200 West Area Sanitary Waste Water System", installs an additional regional Septic System in the central portion of 200 West Area. This system is needed to accommodate increased personnel population at the Plutonium Finishing Plant (PFP) to support cleanup and decommissioning activities, as well as other 200 West cleanup activities. An additional septic system replacement for the failed system at the Yakima Barricade is not supported in the target case and is funded in incremental UAS 2TQ, "Sanitary Sewer Projects and Replacements - Incremental".
SIGNIFICANT CHANGES FROM FY 2001- 2002:
The increase from FY 2001 to 2002 is due to needs and requirements continuing to increase due to the aging infrastructure. Prior year funding support has not kept pace with these needs. In FY 2002 incremental funding in UA 2TQ is proposed to replace a failed system at the Yakima Barricade.
CONNECTIVITY FROM UAS TO PBS END POINTS:
This UA contributes to the accomplishment of the PBS end point by providing safe, environmentally compliant, and cost effective infrastructure to support the Site cleanup mission through 2046.

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 101 **PBS #:** RL-TP13 **Unit of Analysis:** 0C5

UAS Title: Transportation

Benefits Summary

This UA provides the timely and cost effective major maintenance, refurbishment, and upgrade of the Site general use roads and parking lots. In FY 2002 refurbishment of roads, much of which has been deferred from prior years. Funding the level of needed roadwork identified is vital to maintaining essential Site roads within the Landlord Project 10-year plan.

Many of the main roads are deteriorating rapidly due to heavy hauling by the Environmental Restoration Project and inadequate funds in prior years to properly maintain the Site roads. This is especially important to support the increased traffic resulting from the Vitrification Plant Construction. Increased funding to refurbish the backlog of roads needing major maintenance will assure safe roadways for the transport of personnel, materials, and equipment throughout the Site.

CONNECTIVITY FROM UAS TO PBS END POINTS: This UA contributes to the accomplishment of the PBS end point by providing timely repairs, renovations, and/or replacement of transportation systems. Maintenance to site roads extends the life of the Transportation system in support of the Site mission. Assuring roads are safe and compliant components of the Site Infrastructure, supports the overall goal of this PBS to provide a safe, environmentally compliant, and cost effective infrastructure to the end state of 2046.

SIGNIFICANT CHANGES FROM FY 2001-2002:

Deferrals in previous years of funding for road refurbishment and equipment replacements have resulted in the need for increased funding. The increase from FY 2001 to 2002 is due to additional roadwork. Prior years budget reductions are causing a bow wave of Transportation needs, requiring immediate attention to support the Site mission in a timely and cost effective manner. Therefore, in FY 2002 UA 2TN, "Transportation Incremental" has been created for transportation equipment replacements and some additional Road Refurbishment not in the target case, but which are vital to the Site cleanup mission.

Regulatory Drivers

There are no TPA, DFNSB or consent decree drivers associated with this activity at this time. However, this activity is essential to support the completion of numerous TPA, DNFSB, and consent decree drives related to the handling and transport of waste on the Hanford Site.

DOE Priority: 102 **PBS #:** RL-TP13 **Unit of Analysis:** 02J

UAS Title: Facilities & Land Use

Benefits Summary

The scope of this UA is to provide essential major maintenance and equipment replacements for infrastructure general-purpose facilities (offices, sitewide support laboratories, shops, warehouses, etc.), overall management of the Landlord Project, and integration of land and facility uses at Hanford. In FY 2002 this UA:
1. Continues the site wide integration of land and facility uses based on the requirements established in the Hanford Comprehensive Land Use Plan Environmental Impact Statement (CLUP) approved in FY 2000
2. Provides overall management of the Landlord Project and includes RL placed Contracts
3. Replaces the 325 Building Exhaust System to meet current requirements
4. Replaces the roof for continued use of key infrastructure facilities (275E and 4706 buildings) that are beyond their useful life and need major maintenance.
5. Maintains the sitewide Mapping and Facilities Core Systems to support all Hanford Site user needs

This workscope contains the minimum activities to support the major corrective and preventive maintenance and repair of essential infrastructure general-purpose facilities systems. This workscope includes the necessary planning, engineering, NEPA documentation, equipment procurement, and installation. The overall Landlord Project management and integration of Hanford land and facility uses involves:
Central clearinghouse for project requirement determination, integration, and processing permit approval requirements. Processing site selections for the overall site, operating areas, and specific parcels of land Strategic planning to establish customer infrastructure needs and requirements to support the Hanford cleanup mission to the end state (currently 2046). Sitewide systems integration of infrastructure needs and requirements, Project definition and management including updates of technical baseline and supporting documents. Resource protection including institutional control and records management, Asset conversion, excess facilities management, and promotion of Hanford land as strategic assets to contribute to local area economic development. Coordination of a sitewide mapping system to best utilize utility corridors and have accurate maps of existing facilities and system. Accurate maps, also, support ongoing analysis of land uses issues. Preparation of PBS, PPL, and MYWP, Overall management of Landlord Project to assure scope, costs, and schedules are maintained within established baselines and in a safe, secure, environmentally sound, and cost-effective manner. Business management and financial control of the Project including development and preparation of activity based cost estimates, resource loaded schedules, change control, and monthly financial reports. Funding of this workscope also supports the overall project mission to provide essential infrastructure services to the Site and is an ongoing requirement through the Project end point of 2046.
SIGNIFICANT CHANGES FROM FY 2001- 2002:
Overall there is no significant changes in this UAS from FY 2001 to 2002. Infrastructure needs and requirements are continuing to increase due to the aging infrastructure and prior year funding support has not keep pace with these needs. Therefore, in FY 2002 UA 2TM, "Facilities and Land Use Incremental " case has been created for additional essential services needs.
CONNECTIVITY FROM UAS TO PBS END POINTS:
This UA contributes to the accomplishment of the PBS end point by providing repairs, renovations, or replacement of systems, in aging facilities, thereby extending the life cycle in support of the Hanford Site mission. The overall goal of this PBS is to provide a safe, environmentally compliant, and cost effective infrastructure to support the Site cleanup mission through 2046.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decrees associated with this activity at this time.

DOE Priority: 103 **PBS #:** RL-TP13 **Unit of Analysis:** 15C

UAS Title: Emergency Services/Preparedness Renovations

Benefits Summary

This UA provides essential renovations and upgrades to Emergency Services and Preparedness facilities to meet the Site cleanup mission. The FY 2002 the Emergency Services and Preparedness essential renovations includes only the completion of the 200 Area Emergency Services Equipment Bay Renovation (Project L-276) begun in prior years. The completion and closeout of this project will bring the fire station into compliance with nationally recognized standards governing fire station facilities. Replacement of Emergency Services Equipment is under UA 2PE and incremental Renovations of Emergency Services/Preparedness Facilities are under UA 2TR.
SIGNIFICANT CHANGES FROM FY 2001- 2002:
There is a significant decrease in funding from 2001 to 2002 in this UA, as it only includes the completion of Project L-276. This UA includes only the most significant facility renovations, therefore, a backlog of Emergency Services/Preparedness projects are under UA 2TR, "Emergency Services/ Preparedness Renovations - Increment".
CONNECTIVITY FROM UAS TO PBS END POINT:
This UA contributes to the accomplishment of the PBS end point by providing timely, cost effective renovation of vital Infrastructure facilities. The activities performed in this UA are required to assure the overall Site cleanup mission can be accomplished without major impacts.

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 104 **PBS #:** RL-TP13 **Unit of Analysis:** 2X2

UAS Title: Fee (Landlord)

Benefits Summary

As a pay-for-performance contract, this UA provides these mission areas allocation of PHMC payments to contractors based on their performance. This activity is a required "set aside" of FH fee earnings mandated by the PHMC contract with DOE. FH requires 100% of Fee to be "set aside" and is a prorated distribution based on the project's percentage of the total budget.
SIGNIFICANT CHANGES FROM FY 2001- 2002:
There are no significant changes from FY 2001-2002
CONNECTIVITY FROM UAS TO PBS END POINTS:
This UA contributes to the accomplishment of the PBS end point by assuring incentive to perform contractual activities in an efficient, safe, compliant and cost-effective manner.

Regulatory Drivers

There is no TPA, DFNSB, or Consent Decree associated with this UAS at this time.

DOE Priority: 105 **PBS #:** RL-TP13 **Unit of Analysis:** 2R6

UAS Title: Electrical Utility Distribution Projects and Replacements

Benefits Summary

This UA provides for the replacement of vital Electrical Utility Distribution system equipment and renovation. In FY 2002 there is no activity supported in the Target Case, therefore, an increment case under UA 2TT, "Electrical Utility Distribution Projects and Replacements - Incremental" has been established for essential equipment replacements. It is planned to replace 7 primary substations, 124 secondary substations, and major equipment that are beyond their useful life in the outer years. This will allow for downsizing from the existing 50MvA transformers which are significantly underutilized.

SIGNIFICANT CHANGES FROM FY 2001-2002:

The decrease in this UA from FY 2001 to 2002 is due to budget constraints in FY 2002. There is a backlog of Electrical Utility projects and equipment replacements that are planned on a priority basis. In FY 2002 essential equipment purchases are found in incremental UA 2TT. Infrastructure needs and requirements are continuing to increase due to the aging infrastructure and prior year funding support has not kept pace with these needs.

CONNECTIVITY FROM UAS TO PBS END POINTS:

This UA contributes to the accomplishment of the PBS end point by providing timely renovation, modernization, upgrades, and replacements to essential Electrical Utility Systems, thereby extending the life cycle of these systems in support of the Site mission. The overall goal of this PBS, supported by this UA, is to provide a safe, environmentally compliant, and cost effective infrastructure to support the Site cleanup mission through 2046.

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 106 **PBS #:** RL-WM01 **Unit of Analysis:** 24L

UAS Title: Safeguards & Security (Spent Nuclear Fuel)

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Connectivity from UAS to PBS end points:

Indirect and direct funded activities in this UAS for Safeguards and Security were transferred and are no longer provided under Environmental Management (EM) or under the PBS structure.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 107 **PBS #:** RL-ER10 **Unit of Analysis:** 2GM

UAS Title: RL-ER10 - Env. Restoration Program Management & Support - Safeguards and Security

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 108 **PBS #:** RL-TP02 **Unit of Analysis:** 2GQ

UAS Title: Safeguards & Security (WESF)

Benefits Summary

This UAS will provide the safeguards and security assessment for this mission area including the Waste Encapsulation and Storage Facility (WESF).

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree requirements fulfilled by this UAS.

DOE Priority: 109 **PBS #:** RL-TP04 **Unit of Analysis:** 1N4

UAS Title: SAS - Safeguards & Security identified for transfer to Office of Security and Emergency Operations

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 110 **PBS #:** RL-TP05 **Unit of Analysis:** 22U

UAS Title: Safeguards & Security (PFP)

Benefits Summary

The FY 2002 Safeguards & Security support for the PFP Complex is composed of the following: The PFP vault complex which is operated and maintained to ensure the safe and secure storage of Special Nuclear Material (SNM) until final disposition of SNM is implemented; SNM Inventories; special engineering studies/assessments; maintenance of safeguards and security equipment; Security provided by the Hanford Patrol specific to PFP; Protection Program Planning and Compliance evaluation; SAS Project Management; Vulnerability Assessments and Evaluations; Safeguards and Security consultation for PFP operations and processes. The Safeguards and Security Program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified material. Safety boundary evaluation and documentation and emergency planning will also be included.

There are no significant changes between FY 2001 and FY 2002. This UOA provides the function of maintaining a very active safeguards and security presence at the PFP complex thus allowing risk reduction through stabilization and material disposition activities in other UOAs to be accomplished.

This activity represents the mortgage that will be reduced through implementation of the PFP waste removal, risk reduction, and deactivation sub-projects. As waste removal, risk reduction and deactivation activities are completed this will eliminate the drivers behind safeguards and security requirements, therefore reducing the required resources.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this activity at this time. This UOA supports other UOAs which are associated with DNFSB Recommendation 94-01, which requires all plutonium materials at PFP to be stabilized and packaged consistent with DOE-STD-3013-99 by December 2004.

Other drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 111 **PBS #:** RL-TP08 **Unit of Analysis:** 1N5

UAS Title: Safeguards & Security (324/327)

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 112 **PBS #:** RL-TP10 **Unit of Analysis:** 2E1

UAS Title: SAS - Safeguards and Security identified for transfer to the Office of Security and Emergency Operations

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 113 **PBS #:** RL-TP12 **Unit of Analysis:** 1NR

UAS Title: Safeguards & Security (NMS)

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 114 **PBS #:** RL-TP14 **Unit of Analysis:** 2E2

UAS Title: SAS - Safeguards and Security identified for transfer to the Office of Security and Emergency Operations

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 115 **PBS #:** RL-WM03 **Unit of Analysis:** 2GS

UAS Title: Safeguards & Security (Waste Management)

Benefits Summary

This UAS will provide the safeguards and security assessment for this mission area including the Solid Waste, Treatment, and Liquid Effluents facilities.

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree requirements fulfilled by this UAS.

DOE Priority: 116 **PBS #:** RL-WM06 **Unit of Analysis:** 1PE

UAS Title: Safeguards & Security (Analytical Services)

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft of loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Significant changes from FY 2001 - FY 2002:
There are no significant changes.

Connectivity from UAS to PBS endpoints:
Indirect and direct funded activities in this UAS for Safeguards and Security were transferred and are no longer provided under Environmental Management (EM) or under the PBS structure.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 117 **PBS #:** RL-OT01 **Unit of Analysis:** 2XN

UAS Title: Safeguards & Security (Site Planning & Integration)

Benefits Summary

Benefits Summary:
The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Risk Narrative:
There is no risk reduction in FY 2002 applicable to this UAS.

Significant Mortgage Reduction Activities:
No mortgage reduction associated with this UAS.

Significant Changes from FY 2001-2002:
No significant changes.

Connectivity from UAS to PBS end points:
Indirect and direct funded activities in this UAS for Safeguards and Security were transferred and are no longer provided under Environmental Management (EM) or under the PBS structure.

TPA, DNFSB, or Consent Decree Drivers:
Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 118 **PBS #:** RL-OT01 **Unit of Analysis:** 2Y8

UAS Title: Safeguards Security (Environmental Compliance)

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Connectivity from UAS to PBS end points:
Indirect and direct funded activities in this UAS for Safeguards and Security were transferred and are no longer provided under Environmental Management (EM) or under the PBS structure.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 119 **PBS #:** RL-OT01 **Unit of Analysis:** 1UL

UAS Title: PNNL SAS (Safeguards & Security identified for transfer to S.O. Program in FY 2001)

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

SIGNIFICANT CHANGES FROM FY 2001-2002:
No significant changes.

CONNECTIVITY FROM UAS TO PBS END POINTS:
Indirect and direct funded activities in this UAS for Safeguards and Security were transferred and are no longer provided under Environmental Management (EM) or under the PBS structure.

Regulatory Drivers

TPA, DNFSB, or Consent Decree Drivers:
Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 120 **PBS #:** RL-OT01 **Unit of Analysis:** 2ZE

UAS Title: Safeguards & Security (Site Systems Engineering)

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 121 **PBS #:** RL-HM01 **Unit of Analysis:** 1SU

UAS Title: Safeguards & Security (HAMMER)

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Significant Changes from FY 2001-2002:
No significant changes.

Connectivity from UAS to PBS end points:
Indirect and direct funded activities in this UAS for Safeguards and Security were transferred and are no longer provided under Environmental Management (EM) or under the PBS structure.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 122 **PBS #:** RL-ST01 **Unit of Analysis:** 1U0

UAS Title: PNNL SAS (Safeguards & Security identified for transfer to S.O. Program in FY 2001)

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of staff, the public or the environment.

SIGNIFICANT CHANGES FROM FY 2001-2002

No significant changes.

CONNECTIVITY FROM UAS TO PBS END POINTS:

Indirect and direct funded activities in this UAS for Safeguards and Security were transferred and are no longer provided under Environmental Management (EM) or under the PBS structure.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 123 **PBS #:** RL-TP11 **Unit of Analysis:** 1LY

UAS Title: Safeguards & Security (Advanced Reactor)

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.

Significant Changes from FY 2001-2002:
No significant changes.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 124 **PBS #:** RL-TP13 **Unit of Analysis:** 1QG

UAS Title: Safeguards & Security (Landlord)

Benefits Summary

The Safeguards and Security program ensures appropriate levels of protection for the Hanford Site against unauthorized access; theft or diversion of SNM; acts of sabotage; espionage; theft or loss of classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public or the environment.
CONNECTIVITY FROM UAS to PBS END POINTS:
Indirect and direct funded activities in this UAS for Safeguards and Security were transferred and are no longer provided under Environmental Management (EM) or under the PBS structure.
SIGNIFICANT CHANGES from FY 2001-2002:
No significant changes.

Regulatory Drivers

Drivers include: DOE Orders 401, 471.A, 472.B, 1242.B, 1360.2B, 5632.1C, 5670.3; 10 CFR 707, 710 subpart B, 1046; Sections 141 & 142 of the US Atomic Energy Act of 1954, as amended; Executive Order 12958.

DOE Priority: 125 **PBS #:** RL-WM01 **Unit of Analysis:** 289

UAS Title: Subject to RL Site Mgmt Board Allocation

Benefits Summary

No narrative data provided.

RL FY2002 BUDGET FORMULATION

DOE Priority: 128 **PBS #:** RL-WM03 **Unit of Analysis:** 2N8

UAS Title: Congressional Rescission Reinstatement

Benefits Summary

No narrative data provided.

DOE Priority: 129 **PBS #:** RL-WM06 **Unit of Analysis:** 2N9

UAS Title: Subject to RL SMB Allocation (Labs)

Benefits Summary

No narrative data provided.

DOE Priority: 130 **PBS #:** RL-TP13 **Unit of Analysis:** 21N

UAS Title: Subject to RL Site Management Board Allocation

Benefits Summary

Subject to RL Site Management Board Allocation

DOE Priority: 132 **PBS #:** RL-WM01 **Unit of Analysis:** 0EQ

UAS Title: Design/Modify/Construct Systems for Fuel Movement

Benefits Summary

This Unit of Analysis (UAS) acquires the equipment and facilities in conjunction with UAS OES (Operate SNF Removal Systems) to operate SNF removal systems, and UAS OER (Design/Construct Canister Storage Building) and OET (Receive Defense Production Reactor SNF) to build and operate the Canister Storage Building (CSB). These UAS assure the safe removal of approximately 2100 metric tons of irradiated metallic uranium fuel, containing millions of curies of radioactive materials, from the current storage location in the K Basins near the Columbia River.

This UAS provides for acquisition of systems required for fuel removal from the K Basins, and the facility and equipment for cold vacuum drying (CVD) of the fuel including design, procurement and construction of CVD structure as well as development of safety and environmental documentation. Fuel storage Multi Canister Overpacks (MCOs/Baskets) and cask/transporters are acquired to contain K Basins fuel elements and fuel scraps and MCO welding equipment to be installed in the CSB Welding Station, for sealing the MCOs for interim storage. This UAS also provides for the resolution of upgrades to the K Basin facilities that will be completed as needed to facilitate fuel removal operations.

Work Planned in FY2002:

Funding for FY2002 will provide for continued fabrication of Multi-Canister Overpack and storage baskets to maintain the inventory necessary to support the rate of transfer of fuel elements from the K Basins to the Canister Storage Building.

Regulatory Drivers

Without the work performed under this UAS, commitments to implement the DNFSB Recommendation 94-1, Improved Schedule for Remediation in the Defense Nuclear Facilities Complex, and the TPA milestones, M-34-17 and M-34-18B, to start fuel removal from the second basin and to complete fuel removal from the K Basins cannot be met. The SNF project completion milestone, M-34-00A, to complete sludge, debris and water removal will not be attained.

RL FY2002 BUDGET FORMULATION

DOE Priority: 133 **PBS #:** RL-WM01 **Unit of Analysis:** 30M

UAS Title: Project Fee (Support Cleanup)

Benefits Summary

No narrative data provided.

DOE Priority: 134 **PBS #:** RL-WM01 **Unit of Analysis:** 0ES

UAS Title: Operate SNF Removal Systems

Benefits Summary

This Unit of Analysis (UAS) performs fuel removal operations in conjunction with UAS OET (Receive Defense Production Reactor SNF) to operate the Canister Storage Building (CSB), assuring the safe removal of approximately 2100 metric tons of irradiated metallic uranium fuel, containing millions of curies of radioactive materials, from its current storage location in the K Basins near the Columbia River.

This UAS provides for operation of systems required for fuel removal and the facility and equipment for cold vacuum drying (CVD) of the fuel. Within the scope of this UAS, fuel is removed from the existing canisters, cleaned and loaded into Multi-Canister Overpacks (MCOs), transported to the CVD Facility, dried in CVD Facility processing stations, and transported to the CSB. Basin water will be treated as necessary to maintain water quality during fuel removal operations, and reduce tritium levels.

This UAS also includes maintaining the authorization basis documentation and provides technical data required for operation of fuel removal equipment and the CVD. The cost contingency required to support the SNF Project TPA baseline is also included in this UAS through FY 2003. Contingency requirements were determined by a combined Monte Carlo analysis of the identified risks and standard distribution calculations based on subproject life cycle status.

Work Planned in FY2002:

Funding for FY2002 will provide for the completion of the readiness review process for authorization of the start of fuel removal from the K East Basin. The work will include removal of fuel from both basins, the processing of MCOs through the Cold Vacuum Drying (CVD) Facility and the transportation from the K Basins, through the CVD to the Canister Storage Building. The fuel removal and processing work includes equipment operation, transportation, training, radiation monitoring, and fuel removal operations management. Also included is the removal and disposition of empty K Basin storage canisters.

Regulatory Drivers

Initiation of SNF movement out of the K Basins in November 2000 and into interim dry storage in the 200 Area in December 2003 is a Tri-Party Agreement milestone (M-34-18B). All activities performed under this Unit of Analysis are required to comply with Defense Nuclear Facilities Safety Board Recommendation 94-1 Implementation Plan Commitment Number 117.

DOE Priority: 135 **PBS #:** RL-WM01 **Unit of Analysis:** 0ET

UAS Title: Receive Defense Production Reactor SNF (at CSB)

Benefits Summary

This Unit of Analysis (UAS) operates and maintains the facility and equipment for staging and interim storage of approximately 2100 metric tons of irradiated metallic uranium fuel, following removal from its current storage location in the K Basins, approximately 400 meters from the Columbia River. This UAS provides for operation of the CSB including the Multi-Canister Overpack Handling Machine (MHM), and welding of the MCO's until all K Basins SNF is in interim dry storage, and the facility is turned over for long-term operation.

Upon completion of the fuel removal and fuel conditioning process, conditioned fuel is safely stored in the CSB. The risk of accidents during placement is low, with very low levels of public exposure. During storage, the radiation levels outside the CSB are low and the probability of accidents is low.

Completion of the UAS is required to keep the risks associated with the K Basins SNF inventory at an acceptable level until a repository is available for offsite disposition of the fuel. The 200 Area Interim Storage Area for Site-Wide Spent Nuclear Fuel is adjacent to the CSB and shares common operations. Shippingport Pressurized Water Reactor (PWR) Core 2 fuel currently stored at the T Plant will be stored within the CSB. The CSB also accommodates equipment needed to prepare sodium bonded fuel for offsite shipment.

Work Planned in FY2002:

Funding for FY2002 will provide for the operations at the Canister Storage Building to receive and store the fuel from the K Basins. The work scope includes placement of the Multi-Canister Overpacks (MCOs) in the vertical storage tubes, monitoring the initially delivered set of MCOs for storage acceptance, and welding the MCO lids for long term storage. Operations activities include MCO Handling Machine operation, welding, facility maintenance, surveillance, security, radiation monitoring, and facility management.

The PWR fuel currently stored in the Hanford Site T Plant will be received at the CSB and stored until final disposition.

Regulatory Drivers

Initiation of the SNF movement out of the K Basins in November 2000. Completion of fuel movement to interim dry storage in the 200 Area in December 2003 is a Tri-Party Agreement milestone (M-34-18B). All activities performed under this Unit of Analysis are required to comply with Defense Nuclear Facilities Safety Board Recommendation 94-1 Implementation Plan Commitment Numbers 117 and 118.

DOE Priority: 136 **PBS #:** RL-WM01 **Unit of Analysis:** 01Z

UAS Title: Transition 100K Area Facilities (including Debris and Sludge)

Benefits Summary

The purpose of this Unit of Analysis (UAS) is to develop and implement transition activities of K Basin facilities beginning in FY 2000. Deactivation of these facilities reduces risk to the public, environment and on-site workers by removing or stabilizing radiological and hazardous contamination and placing these facilities in a "caretaker" status until they can be demolished.

The UAS provides for performance of the facility transition phase and initiation of stabilization and deactivation for K Basins, including debris removal, sludge removal, basin water tritium reduction and basin water removal. It also includes the stabilization and deactivation of the Basin's systems after water removal and transfer of the deactivated K Basins and the 100 K Area Cold Vacuum Drying Facility to Environmental Restoration (ER).

The UAS includes the management systems for transitioning 100 K Area Facilities including: procedures; configuration management; scheduling; defining performance criteria; integrating activities, defining technical baseline, and managing regulatory compliance. The cost contingency required to support the SNF Project TPA baseline is also included in this UAS starting FY 2004. Contingency requirements were determined by a combined Monte Carlo analysis of the identified risks and standard distribution calculations based on subproject life cycle status.

This UAS also acquires the facility and equipment to retrieve and disposition of approximately 70 cubic meters of sludge from its current location in the K Basins, approximately 400 meters from the Columbia River. This includes the design, procurement, and construction of the sludge retrieval and removal systems; the sludge storage canisters and transportation system; and the development of safety, environmental documentation and permits. The K Basins sludge is transported to the Hanford Site T-Plant. This UAS also acquires facilities, systems, and equipment including facility modifications to support debris and water removal and the disposition to Hanford Site facilities.

For K Basin Sludge to be stored in the T-Plant, the Shippingport fuel stored in the T-Plant must be transferred to its interim storage location in the Canister Storage Building. This work is provided under UAS OEW (Implement Site-Wide Interim Storage 200 Area).

Work Planned in FY 2002:

Funding in FY 2002 will provide for the initiation of equipment acquisition and infrastructure buildup for the 100K Area deactivation program.

The planned work also includes acquisition and installation of equipment for removal of sludge from the K Basins. T Plant modifications for the storage of sludge will be completed for the area needed for the initial sludge shipments. The initial set of sludge storage canisters will be fabricated. The work will include development of the safety authorization basis, obtaining permits and confirming readiness documentation for the start of sludge removal operations.

The equipment for removal of the Basin fuel storage racks will be fabricated, modifications to the Basins performed and installation of the equipment begun.

Regulatory Drivers

Activities performed under this UAS are required to comply with the DNFSB Recommendation 94-1 and all TPA milestones (M-34 series) leading to SNF Project completion will be jeopardized.

DOE Priority: 137 **PBS #:** RL-WM01 **Unit of Analysis:** 18K

UAS Title: Operate & Maintain Sludge Removal System

Benefits Summary

This Unit of Analysis (UAS) provides for receipt, retrieval, staging, and processing of sludge. It provides for preparation of sludge for offloading to T Plant; transfer of the sludge to the receiving facilities; and operation and maintenance of the K Basins sludge removal systems and equipment.

This UAS covers work necessary to satisfy the following technical baseline requirements for the Hanford clean up mission:

-Operate and maintain systems and facilities to achieve Tri-Party Agreement milestones (M-34-00A and M-34-10) for initiation and completion of fuel and sludge removal and DNFSB Recommendation 94-1 Implementation Plan Commitment Numbers 119 and 120;
- Remove approximately 70 cubic meters of sludge from the K Basins.

Work Planned in FY2002:

Funding for FY2002 will provide for initiation of the retrieval of floor sludge in the KE basin in support of the fuel removal. The sludge will be accumulated in the Basin for later transfer to the T Plant.

Regulatory Drivers

Movement of sludge out of the K basins and into storage in the 200 Area is a negotiated Tri-Party Agreement milestone (M-34-10). All activities performed under this UAS are required to comply with Defense Nuclear Facilities Safety Board Recommendation 94-1 Implementation Plan Commitment Numbers 119 and 120.

DOE Priority: 139 **PBS #:** RL-WM01 **Unit of Analysis:** 0EW

UAS Title: Implement Site-Wide Interim Storage 200 Area

Benefits Summary

This Unit of Analysis (UAS) provides safe, compliant, and cost-effective long-term management of SNF currently stored at Hanford Site facilities other than the K Basins. This UAS results in SNF removal from existing facilities, such as T Plant and 324/325/327 Buildings, to achieve significant risk and mortgage reduction. The PWR Core 2 SNF stored at the T Plant must be relocated to the 200 Area Canister Storage Building prior to transferring K Basin Sludge to the T Plant. This UAS provides for a long-term storage configuration for the site wide SNF that satisfies requirements for nuclear safety equivalent to comparable Nuclear Regulatory Commission (NRC) licensed facilities. This UAS consolidates SNF in a manner that effectively stages materials for subsequent final disposition. This UAS provides for transfer of sodium bonded Fast Flux Test Facility (FFTF) SNF offsite for treatment required to implement the final disposition. This UAS also provides for minimum safe operations of the Neutron Radiography Facility (NRF) Test Reactor Isotope/General Atomics (TRIGA) and Light Water Reactor (LWR) SNF at the 400 Area.

This UAS also provides plans for final disposition of Site-Wide SNF, including factoring final disposition considerations into near-term management activities, supports definition of national SNF policy and requirements for DOE-owned SNF management.

Approximately 30 metric tons of heavy metal (MTHM) of site-wide SNF is transferred into interim storage from FY 2001 through FY 2002.

Work Planned in FY2002:

Funding for FY 2002 will continue transfers of the SNF currently stored in the following areas. The FFTF SNF transfer from the 400A ISA to the 200A ISA will be completed. The PWR Core 2 SNF stored at the T Plant will be transferred to the 200A Canister Storage Building. The LWR SNF stored at the Hanford Site 324 Building will be transferred to the 200A ISA. Preliminary design will be performed for the repackaging of SNF in the Canister Storage Building.

Regulatory Drivers

Continued surveillance, maintenance, safeguards, and operations will be required to maintain compliance with safety authorization bases and permit requirements at the ISAs. Spent Fuel Working Group vulnerability corrective action plans require SNF removal from deteriorating facilities. Tri-Party Agreement commitments for nondefense production reactor SNF, such as M-81 commitments for FFTF, require completion of activities for long-term SNF management. This UAS supports removal of fuel from T Plant which is required to allow transfer of K Basins sludge to T Plant to comply with Defense Nuclear Facilities Safety Board Recommendation 94-1 Implementation Plan Commitment Numbers 119 and 120. This UAS also provides for fuel removal from other Hanford facilities (such as 324) to meet TPA milestones (such as M-89).

DOE Priority: 140 **PBS #:** RL-WM01 **Unit of Analysis:** 0KW

UAS Title: Operate and Maintain 200 Area ISA

Benefits Summary

Benefits Summary

This Unit of Analysis (UAS) covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- The SNF Project shall also consolidate site wide SNF in the 200 Area Interim Storage Area (ISA).

- Nuclear materials shall be consolidated in the Central Plateau for interim storage pending ultimate disposition.

This UAS provides for the initiation of interim storage of Site-Wide SNF in the 200 Area ISA. Actions include operation and maintenance of the 200 Area Interim Storage Area structures, operating systems, equipment, and monitoring systems within the approved safety and compliance requirements; planning, coordination, and scheduling of the activities required for safe storage in the 200 Area ISA. This UAS ensures the safety of operations by monitoring and maintaining the integrity of storage systems.

Work Planned in FY2002:

Funding for FY2002 will provide for maintaining of TRIGA SNF, the FFTF SNF, and the LWR SNF in the 200A ISA

Regulatory Drivers

This UAS supports removal of fuel from T Plant which is required to allow transfer of K Basins sludge to T Plant to comply with Defense Nuclear Facilities Safety Board Recommendation 94-1 Implementation Plan Commitment Numbers 119 and 120. This UAS also provides for fuel removal from other Hanford facilities (such as 324) to meet TPA milestones (such as M-89).

DOE Priority: 141 **PBS #:** RL-WM01 **Unit of Analysis:** 0ER

UAS Title: Design/Construct Canister Storage Building (CSB)

Benefits Summary

This Unit of Analysis (UAS) acquires the facility and equipment for staging and interim storage of approximately 2100 metric tons of irradiated metallic uranium fuel, following removal from its current storage location in the K Basins approximately 400 yards from the Columbia River. This includes the design, procurement, and construction of the Canister Storage Building (CSB) structure, storage tubes, storage tube plugs, service pit, the Multi-Canister Overpack Handling Machine {MHM}, and the MCO welding stations as well as the development of safety and environmental documentation, including necessary permits.

This UAS provides for acquisition of SNF storage capacity in the CSB. Completion of the UAS is required to keep the risks associated with the K Basins SNF inventory at an acceptable level until a repository is available for offsite disposition of the fuel. The 200 Area ISA for Site-Wide SNF is adjacent to the CSB and shares common operations.

Work scope under this UAS will be completed in FY 2000. No funding is requested for FY 2001.

Regulatory Drivers

Movement of fuel out of the K Basins and into interim dry storage in the 200 Area is a negotiated Tri-Party Agreement milestone. All activities performed under this UAS are also required to comply with Defense Nuclear Facilities Safety Board Recommendation 94-1 implementation agreements as documented in the Hanford Site Integrated Stabilization Management Plan (HNF-EP-0853).

DOE Priority: 142 **PBS #:** RL-WM01 **Unit of Analysis:** 0EV

UAS Title: Design/Construct 200 Area Interim Storage Area (ISA)

Benefits Summary

This Unit Of Analysis (UAS) acquires the 200 Area Interim Storage Area (ISA), adjacent to the Canister Storage Building (CSB) including design and construction. This UAS results in acquiring capacity for SNF removal from existing facilities, such as T Plant and 324/325/327 Buildings, to achieve significant risk and mortgage reduction. This UAS provides for a long-term storage configuration for the sitewide SNF that satisfies requirements for nuclear safety equivalent to comparable Nuclear Regulatory Commission (NRC) licensed facilities. This UAS also provides capacity for transfer of sodium bonded Fast Flux Test Facility (FFTF) SNF offsite for treatment required to implement final disposition.

Work scope under this UAS will be completed in FY 2000. Therefore, no funding is requested for FY 2001.

Regulatory Drivers

All activities performed under this UAS are required to comply with Defense Nuclear Facilities Safety Board Recommendation 94-1 implementation agreements as documented in the Hanford Site Integrated Stabilization Management Plan (HNF-EP-0853).

DOE Priority: 143 **PBS #:** RL-WM04 **Unit of Analysis:** 2U5

UAS Title: SNF Sludge Support

Benefits Summary

This unit of analysis (UAS) provides funding for activities necessary to facilitate storage of K Basin sludge within the T Plant canyon. Facilities within this UAS include the T Plant Canyon. Activities include removal of spent PWR fuel from the T Plant canyon; cleanoff of the canyon deck; and other preparations to make the facility ready to receive sludge; receipt of the sludge, and incremental base operational costs associated with sludge storage.

Regulatory Drivers

Spent fuel removal activities and canyon deck cleanoff are required to support the removal of sludge from the K Basins as specified by M-34-08 and M-34-10. Treatment and disposal of the sludge will be coordinated with other remote-handled TRU waste, in accordance with M-91-03. There are no DNFSB drivers associated with this UAS at this time.

RL FY2002 BUDGET FORMULATION

DOE Priority: 144 **PBS #:** RL-ER10 **Unit of Analysis:** 2SY

UAS Title: RL-ER10 - RL Program Management & Support "Cleanup Progress"

Benefits Summary

Apportioned amount of ER-10 RL-PM&S supporting "Cleanup Progress" (See UOA 00T for remainder of RL-PM&S Costs)

DOE Priority: 145 **PBS #:** RL-ER10 **Unit of Analysis:** 2T0

UAS Title: ER Program Management & Support "Cleanup Progress"

Benefits Summary

Apportioned amount of ER-10 PM&S supporting "Cleanup Progress" (See UOA 00s for remainder of PM&S Costs)

RL FY2002 BUDGET FORMULATION

DOE Priority: 146 **PBS #:** RL-ER10 **Unit of Analysis:** 2SZ

UAS Title: CERCLA Grant to Ecology "Cleanup Progress"

Benefits Summary

Apportioned amount of ER-10 PM&S supporting "Cleanup Progress" (See UOA 0CT for remainder of PM&S Costs)

DOE Priority: 147 **PBS #:** RL-ER01 **Unit of Analysis:** 00J

UAS Title: 100 BC Source Remedial Action

Benefits Summary

The 100-BC Area is one of six reactor areas located in the 100 Area along the Columbia River. The 100-BC Area includes two source operable units (OUs) 100-BC-1 and 100-BC-2, and one independent (IU) designated as 100-IU-1.

The 100-BC-1 and 100-BC-2 OUs contain radiological and mixed waste sites, including 105-B and 105-C Reactor buildings. The two source OUs received several types of liquid effluent, decontamination waste streams, and miscellaneous liquid and solid wastes. Liquid waste discharged to 100-BC-1 and 100-BC-2 OUs totaled approximately 51 million gallons. Solid wastes totaled approximately 32,000 cubic yards.
The reactor area source OUs were assessed and are being remediated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Interim action Records-of-Decision (RODs) were issued to expedite the cleanup process. Sites near the Columbia River are being remediated first, to be followed by sites near the reactor buildings.

Remediation of waste sites in 100-BC-1 and 100-BC-2 involves excavation, disposal of waste in the Environmental Restoration Disposal Facility, backfill and site closeout. Remaining assessment activities are being addressed on an area-wide basis in the 100-HR source remedial action UOA. Remedial action for liquid waste sites will be complete in FY 2000 and remedial design for solid waste sites will be conducted as part of the 100-KR source remedial action UOA and completed in FY 2004. Remedial action for pipelines will begin in FY 2001.

100-IU-1 includes seven waste sites, upstream of the 100-BC reactor area, that were addressed via CERCLA removal actions. A Record-of-Decision was issued indicating "No Further Action" is necessary at this OU.

WHAT ARE WE BUYING (Through FY02):

. Remediation of 19 waste sites and removal of 875K tons of contaminated soil and solid waste through FY 2001.
. Clean up over 25,000 linear feet of process effluent pipelines from the B and C Reactors.
. Completion of remedial design for the solid waste burial grounds and remaining sites.
. These activities are required to support TPA enforceable milestone M-16-26B:(Complete remediation and backfill of 51 waste sites)and milestone M-16-00A: (Complete all 100 area remedial actions).

FY 2000: Complete backfill activities.
FY 2001: Initiate 100-B/C Pipeline remediation effort.
At Target: Remediation activities will be continued in the B/C area at the Target Funding level, however, TPA Milestone M-16-26B is not supported/achievable.

FY 2002: Complete 100-B/C Pipelines remediation effort and 2 waste sites.
Initiate remediation of 20 waste sites.

FY 2003: Continue remediation of waste sites completing 20 waste sites.

FY 2004: Continue remediation of waste sites completing 6 waste sites.

FY 2005: Continue remediation of waste sites completing 2 waste sites.

FY 2006: Continue remediation of waste sites completing 9 waste sites.

FY 2007: Continue remediation of waste sites completing 11 waste sites.

Regulatory Drivers

These activities are required to support TPA enforceable milestone M-16-26B: (Complete remediation and backfill of 51 waste sites, M-16-00A: (Complete all 100 area remedial actions).

Regulatory Compliance: If not completed DOE will not be in compliance with the TPA and/ or the RCRA Permit and may be subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 148 **PBS #:** RL-ER01 **Unit of Analysis:** 00G

UAS Title: 100 HR Source Remedial Action

Benefits Summary

The 100-HR Area is one of six reactor areas located in the 100 Area along the Columbia River. The 100-HR Area includes two surface source operable units (OU), designated 100-HR-1, 100-HR-2

The 100-HR-1 and 100-HR-2 OUs contain radiological and mixed waste sites and the 105-H Reactor building. These two source OUs received several types of liquid effluent and decontamination waste streams, including reactor coolant, ruptured fuel storage liquid effluent, and miscellaneous liquid and solid wastes. Liquid waste discharge to 100-H Area OUs is estimated at 182 million gallons. Solid wastes total approximately 108,000 cubic yards.

The reactor area source OUs will be assessed and remediated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Interim Records-of-Decision (RODs) will be issued to expedite the cleanup process. Sites near the Columbia River will be remediated first, followed by sites near the reactor buildings.

Remediation of waste sites in 100-HR-1 and 100-HR-2 involves excavation, disposal of wastes in the Environmental Restoration Disposal Facility, backfilling and site closeout. Remedial design is being conducted as part of the 100-HR source remedial action UOA.

To date through FY02:

. Remediation of 11 waste sites and removal of 340K tons of contaminated soil and solid waste through FY 2001.
. These activities are required to support TPA enforceable milestone M-16-26B: Complete remediation and backfill of 37 waste sites and milestone M-16-26C: Complete remediation and backfill of 10 liquid waste sites and process effluent pipelines, and milestone M-16-00A: Complete all 100 area remedial actions.

Incremental By Year:

FY 2000: Complete remediation of waste sites completing 11 waste sites. Continue remaining sites design.

FY 2001: Complete backfill of waste sites. Remaining sites design.

FY 2002: Continue field site characterization and design activities.

FY 2003: Continue remediation of waste sites completing 15 waste sites from 100-HR-1.

FY 2004: Continue remediation of waste sites completing 2 waste site from 100-HR-1.

FY 2005: Continue remediation of waste sites completing 1 burial ground waste sites from 100-HR-2.

FY 2006: Continue remediation of waste sites completing 2 burial ground waste sites from 100-HR-2.

FY 2007: Continue remediation of waste sites completing 2 burial ground waste sites from 100-HR-2.

Regulatory Drivers

These activities are required to support TPA enforceable milestone M-16-26B: Complete remediation and backfill 51 waste sites.

These activities are required to support TPA enforceable milestone M-16-26C: Complete remediation and backfill of 10 liquid waste sites. Process effluent pipelines, and milestone M-16-00A: Complete all 100 area remedial actions.

Regulatory Compliance: DOE will not be in compliance with the TPA and/ or the RCRA Permit and subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 149 **PBS #:** RL-ER01 **Unit of Analysis:** 014

UAS Title: 100 NR Source Remedial Action

Benefits Summary

The 100-NR Area is one of six reactor areas located in the 100 Area along the Columbia River. The 100-NR Area includes two surface source operable units (OU), designated 100-NR-1 and 100-NR-2. These OUs also contain individual waste sites including the 105-N Reactor building and the Hanford Generating Facility. The two source OUs received several types of liquid effluent and decontamination waste streams, including reactor coolant, ruptured fuel storage liquid effluent, and miscellaneous liquid and solid wastes.

The reactor area source OUs have been assessed and will be remediated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Interim Records-of-Decision (RODs) will be issued to expedite the cleanup process. Sites near the Columbia River will be remediated first, followed by sites near the reactor buildings.

The remaining scope of work for waste sites in 100-NR-1 and 100-NR-2 includes remedial design and remedial action, which involves excavation, disposal of waste in the Environmental Restoration Disposal Facility, backfill and closeout. Assessment activities are complete with a Record of Decision expected in January, 2000.

WHAT ARE WE BUYING:

To date through FY02:

. Complete remedial design and initiate subsequent remediation of waste sites, including removal of 257K tons of contaminated soil & solid waste, through FY2002.

. These activities are required to support TPA enforceable milestone M-16-00A: (Complete all 100 Area Remedial Actions) and Hanford RCRA permit.

Incremental By Year:

FY 2000: Initiate remediation of the 1325 Crib and trench. Complete remedial design on the 1301 Crib.

FY2001: Complete remediation on the 1325 Crib and Trench. Initiate remediation on the 1301 Crib. Complete remediation on 4 other waste sites.

FY2002: Continual remediation of the 1301 Crib. 100-NR design.

FY2003: Continue remediation of waste sites completing 11 waste sites. Complete remediation of 1301 crib.

FY2004: Continue remediation of waste sites completing 11 waste sites.

FY2005: Continue remediation of waste sites completing 11 waste sites.

FY 2006: Continue remediation of waste sites completing 10 waste sites.

FY2007: Continue remediation of waste sites completing 10 waste sites.

Regulatory Drivers

These activities are required to support TPA enforceable milestone M-16-00A: Complete all 100 Area Remedial Actions. Remediation of the 100-N TSD sites is required by specific sections of the Hanford Site RCRA permit (permit #WA7890008967, Rev. 5). Chapter 15 of the permit addresses 116-N-3 Chapter 17 is for 116-N-1 and Chapter 18 is for 120-N-1 and 120-N-2. These chapters incorporate all technical and schedule commitments made in the "100-NR-1 Treatment, Storage and Disposal Units Corrective Measures Study/Closure Plan" (DOE/RL-96-39, Rev. 0 dated Feb 98).

Regulatory Compliance: If not completed DOE will not be in compliance with the TPA and/ or the RCRA Permit and may be subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 150 **PBS #:** RL-ER01 **Unit of Analysis:** 00X

UAS Title: 100 FR Source Remedial Action

Benefits Summary

The 100-FR Area is one of six reactor areas located in the 100 Area along the Columbia River. The 100-FR Area contains two surface operable units (OU) designated 100-FR-1 and 100-FR-2, and one independent unit (IU) designated 100-IU-3.

The 100-FR-1 and 100-FR-2 OUs contain radiological and mixed waste sites including the 105-F Reactor building. The two source OUs received several types of liquid effluent and decontamination waste streams, including reactor coolant, ruptured fuel storage liquid effluent, and miscellaneous liquid and solid waste. Liquid waste discharge to the 100-F Area OUs is estimated at 1,368 million L (360 million gal). Solid waste totals about 70,3380 m3 (92,000 yd3).

The reactor area source OUs will be assessed and remediated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Interim Records-of-Decision (RODs) will be issued to expedite the cleanup process. Sites near the Columbia River will be remediated first, followed by sites near the reactor buildings.

Remediation of waste sites in 100-FR-1 and 100-FR-2 involves excavation, disposal of wastes in the Environmental Restoration Disposal Facility, backfill and closeout. Remedial design is being conducted as part of the 100-HR and 100-KR UOA.

To date through FY02:

. Remediation of waste sites and removal of 406K cubic meters of contaminated soil and solid waste through FY 2002.
. These activities are required to support TPA enforceable milestone M-16-13B: (Complete remediation of 16 waste sites), and M-16-00A: Complete all 100 area remedial actions.

Incremental By Year:

FY 2000: Initiate remediation of waste sites completing 1 waste site from 100-FR-2.

FY 2001: Continue remediation of waste sites completing 4 waste sites from 100-FR-1 and 2 waste sites from 100-FR-2.

FY 2002: Continue remediation of waste sites completing 8 waste sites from 100-FR-1.

FY 2003: Continue remediation of waste sites completing 2 waste sites from 100-FR-2 and 24 waste sites from 100-FR-1.

FY 2004: Continue remediation of waste sites completing 1 waste site from 100-FR-2.

FY 2005: Continue remediation of waste sites completing 2 waste sites from 100-FR-2.

FY 2006: Continue remediation of waste sites completing 2 waste sites from 100-FR-2.

FY 2007: Continue remediation of waste sites completing 6 waste sites from 100-FR-2.

Regulatory Drivers

These activities are required to support TPA enforceable milestone M-16-13B: Complete remediation of 16 waste sites, M-16-00A: Complete all 100 area remedial actions.

Regulatory Compliance: If not completed DOE will not be in compliance with the TPA and/ or the RCRA Permit and may be subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 151 **PBS #:** RL-ER03 **Unit of Analysis:** 00E

UAS Title: 300 FF Source RemediaL Action

Benefits Summary

The 300 Area contains soil contamination resulting primarily from nuclear fuel fabrication operations. The 300 Area includes two surface source operable units (OU), designated as 300-FF-1 and 300-FF-2.

The 300-FF-1 OU contains waste sites such as trenches, ponds, dumping areas, and one burial ground. The major contaminant within the OU is uranium. Also, included in this operable unit are the 300 Area Process Trenches which make up a RCRA Treatment, Storage, and Disposal (TSD) Unit. Of these sites, 20 were remediated and closed out in FY1998. The remaining sites are being remediated under the current CERCLA Record of Decision.

The 300-FF-2 OU encompasses all the geographic area in the 300 and 400 Areas, excluding the 300-FF-1 OU. Management units within this OU consist of burial grounds, dumping areas, sewers, drain fields, storage tanks, cribs, pits, retention basins, trenches, equipment, french drains, unplanned releases, and construction landfills. There also have been a number of new waste sites identified in the last two years. Assessment activities are currently ongoing with issuance of a Record of Decision expected in late FY2000.

To date through FY02:

. Remediation at 30 waste sites and removal of 395K tons of contaminated soil and solid waste through FY 2002.

. Completion of assessment requirements for 300-FF-2 waste sites including specific site walkdowns and assessments, preparation of a Proposed Plan and final issuance of the Record of Decision

. These activities are required to support TPA enforceable milestone M-16-03E: Complete remediation of 300-FF-1, TPA enforceable milestone M-16-03F: Complete 618-4, and M-16-00B: Complete all 300 Area remedial actions.

Incremental By Year:

FY2000: Continue remediation of 12 sites. Conduct backfill and re-grading operations. Assess 300-FF-2 sites including preparation of a draft Proposed Plan. Complete Record of Decision.

FY2001: Continue remediation activities, with completion of two sites. Initiate treatment and disposal of depleted Uranium waste from the 618-4 Burial Ground. Continue backfill and re-grading efforts.

FY2002: Continue remediation activities with completion of 1 site. Initiate remaining sites phase 1 design.

FY2003: Continue remediation activities with completion of 7 sites.

FY2004: Complete remediation activities with completion of 3 sites.

FY2005: Continue remediation activities with completion of 2 sites.

FY2006: Continue remediation activities with completion of 9 sites.

FY2007: Continue remediation activities.

Regulatory Drivers

The activities are required to support TPA enforceable milestone M-16-03D: Complete remediation of the waste sites in the 300-FF-1 operable unit, M-16-03F: Complete 618-4, and M-16-00B: Complete all 300 Area remedial actions.

Regulatory Compliance: DOE will not be in compliance with the TPA and/or the RCRA Permit and subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 152 **PBS #:** RL-ER01 **Unit of Analysis:** 00Q

UAS Title: 100 DR Source Remedial Action

Benefits Summary

The 100-DR Area is one of six reactor areas located in the 100 Area along the Columbia River. The 100-DR Area includes two surface source operable units (OU), 100-DR-1 and 100-DR-2. These OUs contain individual waste sites and the 105-D and 105-DR Reactor buildings. The two sources OUs received several types of liquid effluent, decontamination waste streams, and miscellaneous liquid and solid wastes. Liquid waste discharged to 100-DR Area OUs totals approximately 26 million gallons. Solid waste totals approximately 52,000 cubic yards.

The reactor area source OUs have been assessed and are being remediated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Interim Records-of-Decision (RODs) were issued to expedite the cleanup process. Sites near the Columbia River are being remediated first, to be followed by sites near the reactor buildings.

Remediation of waste sites in 100-DR-1 and 100-DR-2 involves excavation, disposal of wastes in the Environmental Restoration Disposal Facility back-filling and closeout. Remaining assessment activities are being addressed on an area-wide basis in the 100-HR source remedial action UOA. Remedial design for solid waste sites is being conducted as part of the 100-KR source remedial action UOA and will be completed in FY 2001.

To date through FY02:

. Remediation of 24 waste sites and removal of 681K tons of contaminated soil and solid waste through FY 2002.
. These activities are required to support TPA enforceable milestone M-16-26B: (Complete remediation of 51 waste sites), M-16-07B: Complete 24 waste sites, and M-16-00A: Complete all 100 area remedial actions.

Incremental By Year:

FY 2000: Continue remediation of waste sites completing 16 100-DR-1 waste sites.

FY 2001: Complete backfill activities.

FY 2002: N/A (No scope planned).

FY 2003: Continue remediation of waste sites completing 29 waste sites.

FY 2004: Continue remediation of waste sites completing 3 waste sites.

FY 2005: Continue remediation of waste sites completing 5 waste sites.

FY 2006: Continue remediation of waste sites completing 2 waste sites.

FY 2007: Continue remediation of waste sites completing 1 waste site.

Regulatory Drivers

These activities are required to support TPA enforceable milestone M-16-26B: Complete remediation of 51 waste sites, M-16-07B: Complete 24 waste sites, and M-16-00A: Complete all 100 area remedial actions.

Regulatory Compliance: If not completed DOE will not be in compliance with the TPA and/ or the RCRA Permit and may be subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 153 **PBS #:** RL-ER06 **Unit of Analysis:** 0BE

UAS Title: DR Reactor Interim Safe Storage [ISS]

Benefits Summary

The majority of the 100 Area surplus facilities and waste sites are located within a half mile of the Columbia River. The Columbia River is currently being considered for a Wild and Scenic designation by Congress and is currently utilized, along the Hanford Site, for recreational purposes by the public. Cultural resources have been identified in areas along the river. Nesting grounds for endangered/threatened species are also located in this area. The land in the 100 Areas is ceded Tribal land and is of interest to local government and private groups for economic and recreational development. There are two potential pathways for exposure and injury: 1) contamination migrating off-site through the air, and 2) direct contact with the facilities resulting in exposure or injury.

Decontamination and decommissioning (D&D) of the 100 Area inactive facilities is required to allow completion of remedial actions and close-out of the 100 Area National Priority List (NPL) site. The Interim Safe Storage (ISS) of the 105-DR Reactor is the first phase of the disposition alternative selected in the Surplus Reactor EIS-ROD signed in 1993. ISS will reduce the footprint of the reactor complex by 75% to the primary shield wall that surrounds the graphite block, remove all the remaining attached structures, including the fuel storage basin (empty) and seal all openings so that the facility is in an environmentally safe and secure condition. ISS will reduce the risk to workers required to conduct S&M, minimize the threat of intrusions, and reduce the potential for contaminant spread from the facility. The ISS of the 105-DR began in FY99 and is planned for completion within the ten year planning period.

To date through FY02:

This Unit of Analysis assumes continued closure funding through FY 2005. In support of the goal to accelerate 100 Area completion, the Interim Safe Storage (ISS) of DR Reactor on the River, includes the following through FY2002:

. Complete hazardous material removal inside the SSE. Complete pipe and equipment removal outside the RX building.

. Demolish the below grade structure

. Complete hazardous material removal in the SSE

. Complete below grade structural demolition, sampling and analysis, and backfill

Incremental By Year:

FY2000:
Develop SSE pourback subcontract package
Perform pipe and equipment removal outside the RX building
Complete below grade demolition

FY 2001:
Continue hazardous material removal in the SSE
Initiate below grade structural demolition
Complete pipe and equipment removal outside the RX building

Target: No Activities supporting DR Reactor will be performed at the target funding level.
FY2002:
Complete hazardous material removal in the SSE
Complete below grade structural demolition
Complete sampling analysis/RESRAD studies

Target: No Activities supporting DR Reactor will be performed at the target funding level.

FY2003:

Complete characterization documents
Complete stairwell demolition
Mobilize SSE subcontractor

Impact Adjustment: In addition to the above activities:

Continue hazardous material removal in the SSE
Initiate below grade structural demolition
Complete pipe and equipment removal outside the RX building
Complete hazardous material removal in the SSE
Complete below grade structural demolition
Complete sampling analysis/RESRAD studies

FY2004:
Complete SSE installation

FY2005:
Project closeout

FY 2006:
N/A

Regulatory Drivers

This work is required to support enforceable TPA milestone M-93-16: Complete 105-DR Interim Safe Storage.

DOE Priority: 154 **PBS #:** RL-ER08 **Unit of Analysis:** 011

UAS Title: 100 HR Groundwater Remedial Action

Benefits Summary

The 100 HR Groundwater OU consists the groundwater contamination that underlies the 100 DR and 100 HR Reactor Areas. This OU is located in the northern area of the Hanford Site along the section of the Columbia River known as the Hanford Reach. Levels of low-level radiological and chemical contamination entering the Columbia River are providing an increased risk to ecological receptors such as salmon redds. The groundwater contamination plumes underlie approximately 1.6 million square meters of the 100 DR and 100 HR operable units (Ous). The contaminated soils for the 100 DR and 100 HR OUs are addressed in separate UOAs.

This UOA is for the remedial design and remedial action activities for the groundwater contamination that underlies the 100 HR and 100 DR OUs. The remedial actions are designed to reduce the risk to the environment by removing the contamination from the groundwater, reinjection of the treated groundwater, and disposal of the collected contaminants. These actions will be taken in accordance with a Record of Decision (FY96) and result in a reduction of risk to ecological receptors. The scope of the UOA covers the management, planning, design field work, remedial action, and final documentation of the RA for the 100 HR Groundwater OU.This Remedial Action will continue through FY02, per the interim ROD; operation beyond FY02 will be evaluated/determined with the Regulators, and scope/cost adjustments will be made as required.

To date through FY02

Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 DR and 100 H Areas. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 gpm to accomplish these goals. The remedial action will continue through FY02 as required in the interim ROD.

Incremental By Year:

FY2000: Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 DR and 100 H Areas. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 gpm to accomplish these goals.

FY2001: Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 DR and 100 H Areas. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 gpm to accomplish these goals.

FY2002: Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 DR and 100 H Areas. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 gpm to accomplish these goals.

FY2003: TBD.

FY2004: TBD.

FY2005: TBD.

FY 2006: TBD.

Regulatory Drivers

Sample monitoring wells (1244 Well Trips), laboratory analysis of samples, data input into Hanford Environmental Information System database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, begin develoment of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone.

Regulatory Compliance: DOE will not be in compliance with the TPA and/ or the RCRA Permit and subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 155 **PBS #:** RL-ER04 **Unit of Analysis:** 0WM

UAS Title: ER Disposal Facility

Benefits Summary

The Environmental Restoration Disposal Facility (ERDF) is a landfill for disposal of CERCLA remediation wastes from the 100 and 300 Area remedial actions, decontamination and decommissioning, and deactivation of surplus facilities. ERDF is a RCRA compliant facility authorized under CERCLA. It is located in the 200 Area and is designed for construction in a phased approach, so that the capacity can be aligned with waste volumes being produced. Final closure of filled cells is also planned during the baseline period.

Note: Through FY02, only 100/300 area (river corridor) RA Wastes are planned to be received at ERDF.

To date through FY02:

. Design and construction of additional facility capacity (Cells 3&4).
. Transportation and disposal of over 3.7 M tons of contaminated soils and solid waste (through FY2002).
. These activities support TPA enforceable milestones assigned to remedial action in the 100 and 300 Areas and should be considered essential services.
. These activities also support site D&D activities.

Incremental By Year:

FY2000: Transport and dispose of remediation waste. Complete construction and begin disposal activities in cells 3&4.

FY2001: Transport and dispose of remediation waste.

FY2002: Transport and dispose of remediation waste.

FY2003: Transport and dispose of remediation waste. Design and begin construction of cells 5&6.

FY2004: Transport and dispose of remediation waste. Continue construction of cells 5&6.

FY2005: Transport and dispose of remediation waste. Complete construction of cells 5&6. Complete closure of cells 1&2.

FY2006: Transport and dispose of remediation waste.

FY2007: Transport and dispose of remediation waste.

Regulatory Drivers

This work is governed by enforceable TPA milestone M-16-92B: ERDF Cells 3&4 ready to accept remediation wastes.

Regulatory Compliance: This activity is required for implementation of the 100 and 300 Area Remedial Actions and is required by the TPA and DOE orders.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 156 **PBS #:** RL-ER08 **Unit of Analysis:** 012

UAS Title: 100 KR Groundwater Remedial Action

Benefits Summary

The 100 KR Groundwater OU consists of the groundwater contamination that underlies the 100 KR Reactor Areas. This area is located in the northern area of the Hanford Site along the section of the Columbia River known as the Hanford Reach. Levels of low-level radiological and chemical contamination entering the Columbia River are providing an increased risk to ecological receptors such as salmon redds. The groundwater contamination plumes underlie approximately 1.6 million square meters of the 100 KR OUs. The contaminated soils for the 100 KR OUs are addressed in separate UOAs.

This UOA is for the remedial design and remedial action activities for the groundwater contamination that underlies the 100 KR OUs. The remedial actions are designed to reduce the risk to the environment by removing the contamination from the groundwater, reinjection of the treated groundwater, and disposal of the collected contaminants. These actions will be taken in accordance with a Record of Decision (FY96) and result in a reduction of risk to ecological receptors. The scope of the UOA covers the management, planning, design field work, remedial action, and final documentation of the RA for the 100 KR Groundwater OU. This Remedial Action will continue through FY12, per the interim ROD and as agreed with the Regulators; operation beyond FY12 will be evaluated/determined with the Regulators, and scope/cost adjustments will be made as required.

To date through FY02:

Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 KR Area. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 gpm to accomplish these goals. The remedial action will continue through FY01 as required in the interim ROD.

Incremental By Year:

FY 2000: Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 KR area. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 GPM to accomplish these goals.

FY2001: Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 KR area. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 GPM to accomplish these goals.

FY2002: Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 KR area. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 GPM to accomplish these goals.

FY2003: Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 KR area. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 GPM to accomplish these goals.

FY2004: Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 KR area. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 GPM to accomplish these goals.

FY 2005: Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 KR area. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 GPM to accomplish these goals.

FY 2006: Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 KR area. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 GPM to accomplish these goals.

FY2007: Hydraulic containment and mass removal of groundwater contaminated with hexavalent curomium in the 100 KR area. Containment will reduce the risk to aquatic receptors in the Columbia River. A groundwater pump and treat system will operate at up to 200 GPM to accomplish these goals.

Regulatory Drivers

Sample monitoring wells (1244 Well Trips), laboratory analysis of samples, data input into Hanford Environmental Information System database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, begin development of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone.

Regulatory Compliance:DOE will not be in compliance with the TPA and/ or the RCRA Permit and subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 157 **PBS #:** RL-ER08 **Unit of Analysis:** 013

UAS Title: 100 NR Groundwater Remedial Action

Benefits Summary

The 100-NR-2 Groundwater OU consists of the groundwater contamination that underlies the 100 NR Reactor Area. This area is located in the northern area of the Hanford Site along the section of the Columbia River known as the Hanford Reach. Levels of low-level radiological and chemical contamination entering the Columbia River are providing an increased risk to human and ecological receptors. The groundwater contamination plumes underlie approximately 0.4 million square meters of the 100-NR-2 OUs. The contaminated soils for the 100 NR OUs are addressed in 100-NR-1.

This Unit of Analysis (UOA) is for the remedial design and remedial action activities for the groundwater contamination that underlies the 100 NR OUs. The remedial actions are designed to reduce the risk to the environment by removing principally the Sr-90 contamination from the groundwater reinjection of the treated groundwater, and disposal of the collected contaminants. These actions will be taken in accordance with a Record of Decision (FY99) and result in a reduction of risk to human and ecological receptors. The scope of the UOA covers the management, planning, design field work, remedial action, and final documentation of the RA for the 100 NR Groundwater OU.

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To date through FY02:

Hydraulic containment and mass removal of the Sr-90 groundwater contaminate plume in the 100 N Area. Containment will reduce the flux of Sr-90 contaminated groundwater to the Columbia River. Containment will be accomplished through a groundwater P&J system at a rate of approximately 60 gpm. The remedial action will continue through FY12 as required under the interim Record of Decision, and as agreed with the Regulators.

Incremental By Year:

FY 2000: Hydraulic containment and mass removal of the Sr-90 groundwater contaminate plume in the 100 N Area. Containment will reduce the flux of Sr-90 contaminated groundwater to the Columbia River. Containment will be accomplished through a groundwater P&J system at a rate of approximately 60 gpm.

FY2001: Hydraulic containment and mass removal of the Sr-90 groundwater contaminate plume in the 100 N Area. Containment will reduce the flux of Sr-90 contaminated groundwater to the Columbia River. Containment will be accomplished through a groundwater P&J system at a rate of approximately 60 gpm.

FY2002: Hydraulic containment and mass removal of the Sr-90 groundwater contaminate plume in the 100 N Area. Containment will reduce the flux of Sr-90 contaminated groundwater to the Columbia River. Containment will be accomplished through a groundwater P&J system at a rate of approximately 60 gpm.

FY2003: Hydraulic containment and mass removal of the Sr-90 groundwater contaminate plume in the 100 N Area. Containment will reduce the flux of Sr-90 contaminated groundwater to the Columbia River. Containment will be accomplished through a groundwater P&J system at a rate of approximately 60 gpm. Investigate and initiate remediation of the TPH plume within 100-NR-2.

FY2004: Hydraulic containment and mass removal of the Sr-90 groundwater contaminate plume in the 100 N Area. Containment will reduce the flux of Sr-90 contaminated groundwater to the Columbia River. Containment will be accomplished through a groundwater P&J system at a rate of approximately 60 gpm. Investigate and initiate remediation of the TPH plume within 100-NR-2.

FY2005: Hydraulic containment and mass removal of the Sr-90 groundwater contaminate plume in the 100 N Area. Containment will reduce the flux of Sr-90 contaminated groundwater to the Columbia River. Containment will be accomplished through a groundwater P&J system at a rate of approximately 60 gpm.

FY 2006: Hydraulic containment and mass removal of the Sr-90 groundwater contaminate plume in the 100 N Area. Containment will reduce the flux of Sr-90 contaminated groundwater to the Columbia River. Containment will be accomplished through a groundwater P&J system at a rate of approximately 60 gpm.

FY 2007: Hydraulic containment and mass removal of the Sr-90 groundwater contaminate plume in the 100 N Area. Containment will reduce the flux of Sr-90 contaminated groundwater to the Columbia River. Containment will be accomplished through a groundwater P&J system at a rate of approximately 60 gpm.

Regulatory Drivers

Sample monitoring wells (1244 Well Trips), laboratory analysis of samples, data input into Hanford Environmental Information System database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, begin development of new consolidated site-wide groundwater model, revise composite analysis report after receiving HQ comments, and support installation of new monitoring wells for M-24 RPA Milestone.

Regulatory Compliance: DOE will not be in compliance with the CERCLA interim Record of Decision, TPA, and/ or the RCRA Permit and subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category):

DOE Priority: 158 **PBS #:** RL-ER06 **Unit of Analysis:** 1C4

UAS Title: D Reactor Interim Safe Storage (ISS)

Benefits Summary

The majority of the 100 Area surplus facilities and waste sites are located within a half mile of the Columbia River. The Columbia River is currently being considered for a Wild and Scenic designation by Congress and is currently utilized, along the Hanford Site, for recreational purposes by the public. Cultural resources have been identified in areas along the river. Nesting grounds for endangered/threatened species are also located in this area. The land in the 100 Areas is ceded Tribal land and is of interest to local government and private groups for economic and recreational development. There are two potential pathways for exposure and injury: 1) contamination migrating off-site through the air, and 2) direct contact with the facilities resulting in exposure or injury.

Decontamination and decommissioning (D&D) of the 100 Area inactive facilities is required to allow completion of remedial actions and close-out of the 100 Area National Priority List (NPL) site. The Interim Safe Storage of the 105-D Reactor is the first phase of the disposition alternative selected in the Surplus Reactor EIS-ROD signed in 1993. ISS will reduce the footprint of the reactor complex by 75% to the primary shield wall that surrounds the graphite block, remove all the remaining attached structures, including the fuel storage basin, and seal all openings so that the facility is in an environmentally safe and secure condition. The fuel storage basin is currently filled with dirt, debris and unknown hardware.

ISS will reduce the risk to workers required to conduct S&M, minimize the threat of intrusions, and reduce the potential for contaminant spread from the facility. The ISS of the 105-D is planned to start FY04.

To date through FY02:

FY2000:

Complete Auditable Safety Analysis \ Final Hazard Classification (ASA\FHC)
Complete Removal Action Workplan (RAW)
Complete Engineering Evaluation\Cost Analysis (EE\CA)
Complete biological cleanup
Complete Legacy Waste Removal
Complete Scoping Surveys and Room by Room walkdowns

Incremental By Year:

FY2000:

See above

FY2001:

N/A (pending available funding)

FY2002:

N/A (pending available funding)

FY2003:

N/A (pending available funding)

FY2004:

Complete DQO\SAP
Begin sampling and analysis activities
Begin Housekeeping and Asbestos Abatement activiites

FY2005:

Complete Asbestos Abatement
Complete Above- Grade Surveys and Sampling & Analysis
Begin hazardous material removal

FY2006:

Begin pipe and equipment removal
Complete hazardous material removal within the SSE
Begin decontamination outside the SSE
Begin above-grade demolition

FY2007:

Complete pipe and equipment removal and decontamination in SSE
Complete above-grade demolition

Regulatory Drivers

The work is required to support TPA Milestone M-93-17-T01 complete the interim safe storage for the 105-D reactor.
The activities are required by the TPA and DOE orders. A major noncompliance would not occur for several years; therefore the risk is moderate to low. After completion of the cleanup activities the area would be in compliance.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 159 **PBS #:** RL-ER06 **Unit of Analysis:** 1C5

UAS Title: H Reactor Interim Safe Storage (ISS)

Benefits Summary

The majority of the 100 Area surplus facilities and waste sites are located within a half mile of the Columbia River. The Columbia River is currently being considered for a Wild and Scenic designation by Congress and is currently utilized, along the Hanford Site, for recreational purposes by the public. Cultural resources have been identified in areas along the river. Nesting grounds for endangered/threatened species are also located in this area. The land in the 100 Areas is ceded Tribal land and is of interest to local government and private groups for economic and recreational development. There are two potential pathways for exposure and injury: 1) contamination migrating off-site through the air, and 2) direct contact with the facilities resulting in exposure or injury.

Decontamination and decommissioning (D&D) of the 100 Area inactive facilities is required to allow completion of remedial actions and close-out of the 100 Area National Priority List (NPL) site. The Interim Safe Storage of the 105-H Reactor is the first phase of the disposition alternative selected in the Surplus Reactor EIS-ROD signed in 1993. ISS will reduce the footprint of the reactor complex by 75% to the primary shield wall that surrounds the graphite block, remove all the remaining attached structures, including the fuel storage basin (empty) and seal all openings so that the facility is in an environmentally safe and secure condition. ISS will reduce the risk to workers required to conduct S&M, minimize the threat of intrusions, and reduce the potential for contaminant spread from the facility. The ISS of the 105-H will start in FY06 and is planned for completion within the ten year planning period

To date through FY02:

FY2000:
Complete Auditable Safety Analysis \ Final Hazard Classification (ASA\FHC)
Complete Removal Action Workplan (RAW)
Complete Engineering Evaluation\Cost Analysis (EE\CA)
Complete biological cleanup
Complete Scoping Surveys and Room by Room walkdowns
FY01: N/A (Pending available funding)
FY02: N/A (Pending available funding)

Incremental By Year:

FY2000:
See above

FY2001:
N/A

FY2002:
N/A

FY2003:
N/A

FY2004:
N/A

FY2005:
N/A

FY2006:
Complete DQO\SAP
Begin sampling and analysis activities
Begin Housekeeping and Asbestos Abatement activiites

FY2007:
Complete Asbestos Abatement
Complete Above- Grade Sampling & Analysis
Begin hazardous material removal

Begin hazardous material removal

Regulatory Drivers

The work is required to support TPA Milestone M-93-18-T01 complete the interim safe storage for the 105-H reactor.
The activities are required by the TPA and DOE orders. A major noncompliance would not occur for several years; therefore the risk is moderate to low. After completion of the cleanup activities the area would be in compliance.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 160 **PBS #:** RL-ER06 **Unit of Analysis:** 09J

UAS Title: B-Reactor Feasibility Study

Benefits Summary

The 105-B Reactor Building is currently being used as a limited access historial reference/landmark. In 1995, ER issued a report on the feasibility of converting the building into a museum. The study was conducted to define the activities necessary to upgrade the building to a museum, evaluate options that would improve B Reactor as a museum attraction, evaluate the technical feasibility of these activities and examine the cost effectiveness of these actions versus dismantling.

The Historic Museum Committee and RL will determine the needed work scope for the inclusion, preservation, and restoration of the 105-B Museum Facilities.

To date through FY02:
A facility hazard and characterization assessment will be developed. This will support the Phase II Feasibility Study. A Surveillance and Maintenance Plan will be developed for long term S&M. The findings of the feasibility study will be addressed to allow for the development of the B Reactor as a museum.

Incremental By Year:

FY2000: The Phase II Feasibility Study for converting the 105-B Reactor into a museum will be completed. This is a follow-up to the Phase I study completed in September of 1995. The Phase II report will be based on guidance from RL, the regulators, and the results of the hazard assessment report completed in FY99.

FY2001: Complete activities for TPA M-93-06-T01. Activities include the development, review, and issuance of the B Reactor Surveillance & Maintenance Plan. The facility will be cleaned up and areas will be isolated to ensure public safety.

Activities will continue on preserving the B Reactor in support of developing the museum.

Target: No activities supporting the B Reactor Feasibility/Museum Plan will be conducted at the target funding level. FY01 TPA Target Milestone M-93-06-T01: Submit B Reactor Surveillance & Maintenance Plan for approval, will not be supported/achieved.

FY2002: N/A

Target: No activities supporting the B Reactor Feasibility/Museum Plan will be conducted at the target funding level. FY01 TPA Target Milestone M-93-06-T01: Submit B Reactor Surveillance & Maintenance Plan for approval, will not be supported/achieved.

FY2003: N/A

Impact Adjustment: Complete activities for TPA M-93-06-T01. Activities include the development, review, and issuance of the B Reactor Surveillance & Maintenance Plan. The facility will be cleaned up and areas will be isolated to ensure public safety.

Activities will continue on preserving the B Reactor in support of developing the museum.

FY2004: N/A

FY2005: N/A

FY 2006: N/A

FY2007: N/A

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

This work is required to support enforceable TPA milestone M-93-05: Issue B Reactor Phase II Feasibility Study Engineering Design Report for public comment.

Regulatory Compliance: These programmatic activities are required to support the historic preservation strategy for the Hanford Site.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 161 **PBS #:** RL-ER06 **Unit of Analysis:** 0BD

UAS Title: F Reactor Interim Safe Storage [ISS]

Benefits Summary

The majority of the 100 Area surplus facilities and waste sites are located within a half mile of the Columbia River. The Columbia River is currently being considered for a Wild and Scenic designation by Congress and is currently utilized, along the Hanford Site, for recreational purposes by the public. Cultural resources have been identified in areas along the river. Nesting grounds for endangered/threatened species are also located in this area. The land in the 100 Area is ceded Tribal land and is of interest to local government and private groups for economic and recreational development. There are two potential pathways for exposure and injury: 1) contamination migrating off-site through the air, and 2) direct contact with the facilities resulting in exposure or injury.

Decontamination and decommissioning (D&D) of the 100 Area inactive facilities is required to allow completion of remedial actions and close-out of the 100 Area National Priority List (NPL) site. The Interim Safe Storage (ISS) of the 105-F Reactor is the first phase of the disposition alternative selected in the Surplus Reactor EIS-ROD signed in 1993. ISS will reduce the footprint of the reactor complex by 75% to the primary shield wall that surrounds the graphite block, remove all the remaining attached structures, including the fuel storage basin, and seal all openings so that the facility is in an environmentally safe and secure condition. The fuel storage basin is currently filled with dirt, debris and unknown hardware. ISS will reduce the risk to workers required to conduct S&M, minimize the threat of intrusions, and reduce the potential for contaminant spread from the facility. The ISS of the 105-F started in FY98 and is planned for completion by the end of FY03.

To date through FY02:

This Unit of Analysis assumes continued closure funding. In support of the goal to accelerate 100 Area completion, the Interim Safe Storage (ISS) of F reactor, includes the following:

. Continue developing the conceptual Fuel Storage Basin (FSB) disposition plan

. Complete the IV DQO/SAP (Stage I and II)

. Complete hazardous material removal, pipe and equipment removal in the SSE and outside the RX building

. Complete below grade structural demolition

. Complete SSE facility installation

. Perform above grade and below grade structural demolition of the Fuel Storage Basin (FSB)

Incremental By Year:

FY2000:

. Complete the Phase IV (FSB) (below grade structures) DQO/SAP Stage I and II

. Develop pourback subcontract package

. Finalize the conceptual FSB disposition plan

. Complete hazardous material removal inside the SSE and complete pipe and equipment removal outside the building

. Complete below grade demolition, sampling and analysis, and backfill (excl. FSB)

FY2001:

. Begin demolition of the Fuel Storage Basin

. Begin sampling and analysis of the Fuel Storage Basin contents

Incremental By Year:

FY2000:

. Complete the Phase IV (FSB) (below grade structures) DQO/SAP Stage I and II

. Develop pourback subcontract package

. Finalize the conceptual FSB disposition plan

. Complete hazardous material removal inside the SSE and complete pipe and equipment removal outside the building

. Complete below grade demolition, sampling and analysis, and backfill (excl. FSB)

FY2001:

. Begin demolition of the Fuel Storage Basin

. Begin sampling and analysis of the Fuel Storage Basin contents

TARGET: Limited activities supporting F Reactor ISS will be conducted at the Target Funding Level.

FY2002:

. Complete SSE facility installation

TARGET: No activities supporting F Reactor ISS will be conducted at the Target Funding Level.

FY2003:

. Procure & test technologies for FSB soil removal

. Complete removal of the FSB soil & hazardous material

IMPACT ADJUSTMENT: In addition, to the above planned activities:

. Begin demolition of the Fuel Storage Basin

. Begin sampling and analysis of the Fuel Storage Basin contents

FY2004:

. Complete demolition of the FSB below grade structure

. Project close out and demobilization

FY2005:

. N/A

FY2006:

. N/A

FY2007:

N/A

Regulatory Drivers

This work is required to support enforceable TPA milestone M-93-11: Complete 105-F Interim Safe Storage.

The activities are required by the TPA and DOE orders. A major noncompliance would not occur for several years, therefore the risk is moderate to low. After completion of the cleanup activities the area would be in compliance.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 162 **PBS #:** RL-TP08 **Unit of Analysis:** 01V

UAS Title: 324 Closure Plan (B-Cell Cleanout)

Benefits Summary

The B-Cell closure activities are a multi-year effort to remove legacy equipment and dispersible nuclear material from the B-Cell in the 324 Facility. These activities are the most significant stabilization actions, in terms of scope and budget, currently being conducted. The B-Cell closure activities consists of two major units of analysis, B-Cell Clean Out and B-Cell support. The major activities included under the B-Cell Clean Out portion are removal of major process equipment; removal of mixed waste, in the form of dispersible debris and process tank heels; removal of miscellaneous items remaining, following removal of the process equipment; and final cleaning, decontamination and inspection of the cell liner and walls. The B-Cell Clean Out subproject also includes the surveillance and maintenance of in-cell equipment and filters not included as part of, but directly related to B-Cell operations.
This cell is required to be cleaned to meet TPA Milestone M-89-02 which includes activities required to complete equipment removal, waste disposition, cell cleaning and cell liner inspection of the 324 Facility B Cell in support of the 324 Closure Plan. Based on the cell liner inspection the cell liner may also be required to be removed in order to meet the closure requirements. This plan covers the clean-out and deactivation of those areas where non-permitted TSD operations had occurred during past cell operations.

SIGNIFICANT CHANGES FROM FY2001-2002

This project will remobilize after a shutdown due to loss of funding in FY2001. The costs presented in this UAS were moved from FY2001 into FY2002, without consideration for any additional costs associated with remobilization. The costs would include rehiring, training, and reactivation of shutdown systems.

Regulatory Drivers

This UAS supports TPA milestone M-89-02, "Complete Removal of 324 Building REC B-Cell Mixed Waste and Equipment", which is due in FY 2001 on 11/30/2000. Other TPA milestones supported by this UAS are, M-89-00, M-92-13, M-92-14, M-92-15 and M-92-16. None of these milestones are due in FY 2001 but have been delayed and will require renegotiation. There are no DNFSB or Consent Decree activities associated with this work.

DOE Priority: 163 **PBS #:** RL-TP08 **Unit of Analysis:** 1R3

UAS Title: 324 REC Project Management and Equipment Removal

Benefits Summary

The B-Cell Rack and Equipment Removal work scope encompasses the administrative and operational activities necessary to remove, size reduce, containerize, and ship the remaining large process equipment rack (2A Final Off-Gas Treatment Rack) and miscellaneous items within the 324 Facility B-Cell, and to dose profile, grout (as necessary), and ship the legacy waste and previously size reduced process equipment containers in support of the Closure Phase I.

The B-Cell inventory of grout containers (GC) includes six legacy GCs packaged during previous B-Cell cleanout activities. Four of the legacy GCs has been completely grouted, one has been partially grouted, and one is not grouted. The TRU content of the legacy GCs will be determined from dose profiling and representative Cs/TRU ratios.

SIGNIFICANT CHANGES FROM FY2001-2002

The project is currently scheduled to commence in FY01, however, due to funding constraints; this activity has been deferred to FY02.

Regulatory Drivers

This UAS supports TPA milestone M-89-02, "Complete Removal of 324 Building REC B-Cell Mixed Waste and Equipment", which is due in FY 2001 on 11/30/2000. Other TPA milestones supported by this UAS are, M-89-00, M-92-13, M-92-14, M-92-15 and M-92-16. None of these milestones are due in FY 2001 but have been delayed and will require renegotiations. There are no DNFSB or Consent Decree activities associated with this work.

DOE Priority: 164 **PBS #:** RL-TP08 **Unit of Analysis:** 1R2

UAS Title: 324 Legacy Waste

Benefits Summary

Removal and/or disposal of Legacy Waste remaining in the facility from past operations and experiments are necessary to prepare the 324 building for deactivation. Activities include characterization, verification, and repackaging of the waste as required by the Central Waste Complex (CWC) for storage disposal. Of the 140 original Legacy Waste containers, there are 7 remaining at the 324 facility. These 7 containers are the most difficult to deal with, primarily due to high dose rates. Due to past non-conformance with waste acceptance criteria, all Legacy Waste requires 100% verification. Also, part of this UAS is the packaging and disposal of several hundred Material Open Test Assembly (MOTA) sample specimens currently stored in the facility. In order to retrieve these sames the crane in the Shielded Maintenance Facility (SMF) south cell must be repaired, the samples retrieved, loaded into shielded drums and shipped to CWC for disposal.

SIGNIFICANT CHANGES FROM FY2001-2002

The project is currently scheduled to commence in FY 2001, however, due to funding constraints; this activity has been deferred out to FY 2002. There is a significant increase in funding from FY 2001 to FY 2002.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drives associated with this UAS.

DOE Priority: 165 **PBS #:** RL-TP08 **Unit of Analysis:** 0WK

UAS Title: 324 Closure Plan (Phase II, III and IV)

Benefits Summary

This UAS continues the work scope necessary to complete the deactivation of the Radiochemical Engineering Cells (REC), not including the B-Cell within the 324 Facility. The clean out and deactivation of B-Cell to support the interim TPA Milestone M89-02 is covered under UAS 01V 324 Closure Plan (B-Cell). The 324 Closure Plan covers the equipment removal, clean out and deactivation the REC Complex within the 324 Facility where non-permitted TSD operations had occurred during past cell operations. This work scope does support TPA Milestone M89-00; this milestone requires the completion all phases of the 324 Closure Plan by October 17, 2005. This work scope in FY 2001 addresses the activities required to clean out and deactivate the REC Pipetrench and the Vault Sample Room. These areas must be cleaned out to meet the applicable RCRA closure requirements; this will include removal of equipment and waste, decontamination, cell liner inspection. And based on the results of these inspections, removal of the liners may also be required in order to meet the closure requirements.

SIGNIFICANT CHANGES FROM FY2001-2002

This project will remobilize after a shutdown due to loss of funding in FY 2001. The costs presented in this UAS were moved from FY 2001 into FY 2002, without consideration for any additional costs associated with remobilization. The costs would include rehiring, training, and reactivation of shutdown systems.

Regulatory Drivers

This UAS supports TPA milestone M-89-00, ""Completion of the 324 Closure Plan"", which is due in FY 2006 on 10/17/2005. Other TPA milestones supported by this UAS are, M-92-13, M-92-14, M-92-15 and M-92-16. None of these milestones are due in FY 2002. There are no DNFSB or Consent Decree activities associated with this work."

DOE Priority: 166 **PBS #:** RL-TP05 **Unit of Analysis:** 17A

UAS Title: Stabilization Project Management (94-1)

Benefits Summary

This UA provides general support to all the stabilization activities at PFP. This includes engineering studies, general and detailed overall stabilization project planning, project management support, new hire recruiting and training, intersite and intrasite coordination as well as coordinating activities between the various stabilization projects and other PFP activities.

There are no significant changes between FY 2001 and FY 2002.

This UA does not perform mortgage reduction. This UA does, however, perform studies to identify mortgage reduction opportunities that other PFP UAs can perform.

Regulatory Drivers

The DNFSB driver is Recommendation 94-01, which requires all plutonium materials at PFP to be stabilized and packaged consistent with DOE Standard DOE-STD-3013-99 or per the WIPP waste acceptance criteria by December 2004. There are no TPA or Consent Decree drivers associated with this activity at this time.

DOE Priority: 168 **PBS #:** RL-TP05 **Unit of Analysis:** 0F4

UAS Title: Plutonium Solution Stabilization

Benefits Summary

This UA deals with the stabilization of all plutonium-bearing solutions at the Plutonium Finishing Plant (PFP). The PFP inventory of plutonium-bearing solutions will either be stabilized to plutonium dioxide through Mg(OH)2 precipitation or utilizing an existing prototype vertical denitration calciner. The current inventory of plutonium-bearing solutions is approzimately 4300 liters. This scope of work implements the Record of Decision (ROD) resulting from the PFP Stabilization Environmental Impact Statement (EIS).

The funding for this UA decreases from FY 2001 to FY 2002; solution stabilization activities are schedule for completion by 12/30/01.

Each year the stabilization and deactivation projects are delayed results in approximately a $75 Million cost increase to the overall PFP project. That cost is the difference between an average annual cost to maintain the plant Min-safe, infrastructure, perform programmatic work to stabilize/deactivate the PFP complex and the ultimate Min-safe condition once all materials are safely stabilized and placed in safe and secure vault storage until final disposition.

The cost to clean up a vault should a container of solutions leak in storage, would be approximately $5M to $7M (including direct waste costs). The contamination would cause a halt to all programmatic work at PFP for approximately 4 months, due to reassignment of resources to the clean up work. This would extend the life of PFP by 4 months thus increasing the lifecycle cost by approximately $12.5M

Regulatory Drivers

The DNFSB driver is Recommendation 94-01, which requires all plutonium material at PFP to be stabilized and packaged consistent with DOE Standard DOE-STD-3013-99 by December 2004. There are no TPA or Consent Decree driver activities at this time.

DOE Priority: 169 **PBS #:** RL-TP05 **Unit of Analysis:** 0FC

UAS Title: Stabilize Pu-Bearing Solids Residues > 30wt% Pu

Benefits Summary

The special nuclear materials (SNM), which includes plutonium oxides, mixed plutonium-uranium oxides, alloys and metals located in the storage vaults and in the former processing areas at the PFP, will be stabilized to meet DOE-STD-3013-99 criteria and placed back into storage in the PFP 2736-Z vaults pending shipment offsite. This scope of work implements the Record of Decision (ROD) resulting from the PFP Stabilization Environmental Impact Statement (EIS). This action implements the Defense Nuclear Facility Safety Board (DNFSB) Recommendation 94-1 by safely stabilizing reactive scrap oxides in inventory to DOE Standard DOE-STD-3013-99 criteria. The stabilization and vault placement of plutonium-bearing materials will dispose of identified Plutonium Vulnerability corrective actions. This UA covers the processing of materials which have greater than or equal to 30wt% plutonium plus uranium. This processing includes the brushing, and repackaging, of Pu metals and a thermal stabilization process using five (5) furnaces to transform oxides, residues and highly corroded metals into a stable oxide form consistent with DOE-STD-3013-99 criteria. Operations scheduled for fiscal year 2001 are the opening, brushing, and recanning of the plutonium metals and alloys in inventory at PFP. It is expected that some part of the inventory will be sufficiently corroded that brushing off corrosion products will not be effective. That part of the inventory will be thermally processed in furnaces to convert the metal to an oxide form. The brushed metal items will be sealed into welded, inerted containers for long term storage as part of another Unit of Analysis. Also, material characterization of MOX/oxides or metals will be performed as needed to support upcoming thermal stabilization activities. Upgrades to the thermal stabilization processing areas to support Fire Hazards Analysis criteria not completed in previous years is provided. In FY 2002, oxides stabilization will restart in the 234-5Z facility. In addition, the new oxide stabilization equipment being installed in the 2736-ZB facility will become active in May of 2002 and be used to significantly increase the capacity for processing.

The significant change from FY2001 to FY2002 is that metals processing will be completed during FY2001 and oxides stabilization will restart in the 234-5Z facility. In addition, the new oxide stabilization equipment being installed in the 2736-ZB facility will become active in May of 2002 and be used to significantly increase the capacity for processing. As a result, the budget for these activities increases approximately $2M from FY2001 to FY2002.

Each year the stabilization and deactivation projects are delayed results in approximately a $75 Million cost increase to the overall PFP project. That cost is the difference between an average annual cost to maintain the plant Min-safe, infrastructure, perform programmatic work to stabilize/deactivate the PFP complex and the ultimate Min-safe condition once all materials are safely stabilized and placed in safe and secure vault storage until final disposition.

The cost to clean up a vault should a container of oxides fail in storage, would be approximately $9M to $11M (including direct waste costs). The contamination would cause a halt to all programmatic work at PFP for approximately 6 months, due to reassignment of resources to the clean up work. This would extend the life of PFP by 6 months thus increasing the lifecycle cost by approximately $25M.

Regulatory Drivers

The DNFSB driver is Recommendation 94-01, which requires all plutonium materials at PFP to be stabilized and packaged consistent with DOE-STD-3013-99 by December 2004. There are no TPA or Consent Decree drivers associated with this activity at this time.

DOE Priority: 170 **PBS #:** RL-TP05 **Unit of Analysis:** 01R

UAS Title: Package & Store Materials (W-460 et al.)

Benefits Summary

This UA provides a Savannah River Site designed Bagless Transfer System in the 2736-ZB facility that is capable of stabilizing plutonium-bearing materials and packaging this stabilized material consistent with DOE Standard DOE-STD-3013-99. To accommodate the new standardized container configuration, this project will also modify selected PFP vault fixtures and upgrade nondestructive assay (NDA) measurement systems, such as calorimetry and isotopic measurement systems, to accommodate the larger can size to successfully measure the plutonium content of packaged material. The project also makes the necessary facility modifications to support installation and operation of the SPS and storage of the standardized containers. Modifications to 2736-ZB Building include: Upgrade ventilation and exhaust filtration systems, addition of support services for the BTS equipment (e.g., dry air services, off gas treatment, etc.).

This UA also provides for the storage of stabilized plutonium and the packaging of stabilized plutonium to DOE Standard DOE-STD-3013 criteria.

In FY 2002, this UA provides for modifications to storage vaults to accommodate the DOE Standard 3013 containers and provides for repackaging of stabilized plutonium from oxide and solution stabilization operations.

There is minimal mortgage reduction associated with this UA in FY 2002. Each year the stabilization and deactivation projects are delayed results in approximately a $75 Million cost increase to the overall PFP project. That cost is the difference between an average annual cost to maintain the plant minimum safe while performing programmatic work to stabilize/deactivate the PFP complex and the cost when the ultimate minimum safe condition (clean-slab-on-grade, no SNM storage) is achieved.

The cost to clean up a vault should a container of oxides fail in storage, would be approximately $9M to $11M (including direct waste costs). The contamination would cause a halt to all programmatic work at PFP for approximately 6 months, due to reassignment of resources to the clean up work. This would extend the life of PFP by 6 months thus increasing the lifecycle cost by approximately $25M.

The primary difference between the previous FY (FY 2001) discussion and the current (FY2002) discussion is the shift from the DOE consolidated procurement of the Plutonium Stabilization and Packaging System, to the SRS designed Bagless Transfer System (BTS) with a semi-automated stabilization line attached.

Regulatory Drivers

The DNFSB driver is Recommendation 94-01, which requires all plutonium materials at PFP to be stabilized and packaged consistent with DOE Standard DOE-STD-3013 by December 2004. There are no TPA or Consent Decree drivers associated with this activity at this time.

DOE Priority: 171 **PBS #:** RL-TP05 **Unit of Analysis:** 0F5

UAS Title: Disposition Materials

Benefits Summary

Provides for the disposal of wastes associated with stabilization operations, shipment of stabilized plutonium and other special nuclear material (SNM) to the Savannah River Site (SRS) for ultimate dispositioning. Additionally, this UA provides for the stabilization (as required) and disposition of PFP's inventory of unirradiated fuel pins and assemblies.

There are no significant changes between FY 2001 and FY 2002.

There is no mortgage reduction associated with this UA in FY 2002. The mortgage reduction occurs upon completion of shipments to SRS at which time PFP will no longer require the extensive security envelope.

Each year the stabilization and deactivation projects are delayed results in approximately a $75 Million cost increase to the overall PFP project. That cost is the difference between an average annual cost to maintain the plant minimum safe while performing programmatic work to stabilize/deactivate the PFP complex and the ultimate minimum safe condition once all materials are safely stabilized and placed in safe and secure vault storage until final disposition.

Regulatory Drivers

The DNFSB driver is Recommendation 94-01, which requires all plutonium materials at PFP to be stabilized and packaged consistent with DOE Standard DOE-STD-3013-99 or packaged for WIPP disposal by December 2004. There are no TPA or Consent Decree drivers associated with this activity at this time.

DOE Priority: 172 **PBS #:** RL-TP05 **Unit of Analysis:** 0CH

UAS Title: PFP Polycubes (Pyrolysis)

Benefits Summary

This UA deals with stabilization of plutonium-bearing polycubes. The PFP inventory of plutonium-bearing polycubes will oxidized via direct thermal stabilization to a stable plutonium dioxide product and packaged for interim storage pending final packaging which is performed under UOA 01R. The current inventory of polycubes consists of 260 items. No work is currently planned for FY 2002. Stabilization is scheduled for FY 2003 and 2004.

This description reflects the decision to shift from stabilization utilizing the pyrolysis furnace system followed by thermal stabilization to direct thermal stabilization.

There is no mortgage reduction associated with this UOA in FY 2002. The cost to clean up a vault should a container of polycubes fail in storage, would be approximately $9M to $11M (including direct waste costs). The contamination would cause a halt to all programmatic work at PFP for approximately 6 months, due to reassignment of resources to the clean up work. This would extend the life of PFP by 6 months thus increasing the lifecycle cost by approximately $25M.

Regulatory Drivers

The DNFSB driver is Recommendation 94-01, which requires all plutonium materials at PFP to be stabilized and packaged consistent with DOE-STD-3013-99 by December 2004. There are no TPA or Consent Decree drivers associated with this activity at this time.

DOE Priority: 173 **PBS #:** RL-TP05 **Unit of Analysis:** 0D3

UAS Title: Stabilize Pu-Bearing Solids Residues <30 wt% Pu

Benefits Summary

This UA deals with the stabilization (cementation) and/or discard of plutonium-bearing residues at the Plutonium Finishing Plant (PFP). The PFP inventory of plutonium-bearing residues will either be cemented and shipped to the Waste Isolation Pilot Plant (WIPP) for final disposition or directly packaged for disposal at WIPP utilizing the "pipe component" waste drum. The current inventory of plutonium residues consists of approximately 3,628 kg of bulk residue (less than 30 wt% Pu). Cementation operation restarts in FY 2002 and proceeds through FY 2004. An approximate 1,491 Kg bulk residues will be cemented in FY 2002 (cumulative total completed through FY 2002 would be an approximate 1739 Kg bulk). This scope of work implements the Record of Decision (ROD) resulting from the PFP Stabilization Environmental Impact Statement (EIS).

There are no significant activities occurring in this UA in FY2001. Cementation operations are funded and resume in FY2002.

There is minimal mortgage reduction associated with this UA in FY 2002. As more items are discarded as waste there is some reduction in the cost associated with maintaining the inventory of plutonium.

Each year the stabilization and deactivation projects are delayed results in approximately a $75 Million cost increase to the overall PFP project. That cost is the difference between an average annual cost to maintain the plant Min-safe, infrastructure, perform programmatic work to stabilize/deactivate the PFP complex and the ultimate Min-safe condition once all materials are safely stabilized and placed in safe and secure vault storage until final disposition.

The cost to clean up a vault should a container of oxides fail in storage, would be approximately $9M to $11M (including direct waste costs). The contamination would cause a halt to all programmatic work at PFP for approximately 6 months, due to reassignment of resources to the clean up work. This would extend the life of PFP by 6 months thus increasing the lifecycle cost by approximately $25M.

Regulatory Drivers

The DNFSB driver is Recommendation 94-01, which requires all plutonium materials at PFP to be stabilized and packaged consistent with DOE Standard DOE-STD-3013-99 or packaged for WIPP disposal by December 2004. There are no TPA or Consent Decree drivers associated with this activity at this time.

DOE Priority: 174 **PBS #:** RL-TP05 **Unit of Analysis:** 228

UAS Title: Tank 241-Z-361

Benefits Summary

The work scope for this UOA in FY 2001 and 2002 includes the activities required to select technologies and design the facilities for remediation of Tank 241-Z-361, procurement and construction of which are scheduled to begin in FY 2003. All these activities are necessary to transition the Tank 241-Z-361 facility to a safe and stable configuration (slab on grade) awaiting final remediation by the ERC. This configuration will be the result of waste removal and other remediation activities to allow for minimum surveillance. The benefit of the work for this UOA is detailed design and other preparation for remedial activities in the field.

The funding for this UOA decreases from FY 2001 to FY 2002. The work scope for this UOA in FY 2001 includes a feasibility study and the majority of the engineering work required to design remedial facilities; the engineering work will conclude in FY 2002. Procurement and construction will then begin in FY 2003.

Areas of mortgage reduction will include ongoing surveillance, access control, and implementation of safety controls associated with the open Unreviewed Safety Question on the facility. Achievement of end points for this facility will allow reduction of these mortgage costs to very low levels.

Regulatory Drivers

There are two TPA Interim Milestones associated with core sampling, analysis and evaluation in FY 2000. The Interim Milestones are: M-15-37A, Deliver two cores samples from Tank 241-Z-361 to a laboratory for analysis, and M-15-37B, Provide the EPA with complete data packages, including validation, for two core collected from Tank 241-Z-361. Provide to the EPA a recommendation for a regulatory path forward for the disposition of the Tank 241-Z-361 sludge (e.g. expedited response, interim remedial action, or defer to the 200PW-1 Operable Unit RI/FS Process). Interim Milestone M-15-37A has been completed. Interim Milestone M-15-37B is a DOE-RL deliverable and is due by May 31, 2000. There are no DNFSB or Consent Decree drivers for this UOA.

DOE Priority: 175 **PBS #:** RL-TP05 **Unit of Analysis:** 2F6

UAS Title: Accelerated Stabilization

Benefits Summary

This UOA provides for an extra stabilization crew to support an additional shift of stabilization operations at PFP for the years FY 2002 through FY 2003. The assumption is that hiring, clearing and training of the crew in FY 2001 would be funded via the "Buy Back" list. The crew would consist of 10 NPOs, 2 RCT, 1 Shift Manager, 1 Field Work Supervisor, 1 SWO, 1 SNM Custodian, 2 Lab Technicians, & 1 Engineer/Scientist. This crew would operate various stabilization systems that are or would be available for operations at PFP in support of the DNFSB Recommendation 94-1 Program. In FY 2001, the crew would be hired, trained and obtain security clearances. In FY 2002, this crew would support completion of Solution Stabilization operations as well as support Polycube and Oxide Stabilization and Repackaging operations. In FY 2003, the crew would continue supporting Oxide Stabilization and Repackaging operations.

This UOA would accelerate completion of DNFSB Recommendation 94-1 Program work by 3 to 6 months thus allowing PFP to accelerate deactivation, cleanup and dismantlement activities by up to 6 months. The net life cycle savings could reach $40 million.

Regulatory Drivers

The DNFSB driver is Recommendation 94-01, which requires all plutonium materials at PFP to be stabilized and packaged consistent with DOE-STD-3013. With the additional crews, the completion could be accelerated by up to 12 months to as early as December 2003. There are no TPA or Consent Decree drivers associated with this activity at this time.

DOE Priority: 177 **PBS #:** RL-ER02 **Unit of Analysis:** 0WL

UAS Title: 200 NPL Common Assessment/Remedial Action

Benefits Summary

Funding of this UAS is necessary to complete the environmental restoration (ER) remedial action (RA) work scope consistent with the 200 Areas RI/FS Implementation Plan (DOE-RL-98-28), Rev. 0, and complete the Hanford prototype barrier monitoring and meet TPA commitments.

The 200 Areas Source Remedial Action (RA) consists of 22 Source Operable Units (OU) located on the central plateau of the Hanford reservation. The 200 Areas can be broken down into 200 East, 200 West and 200 North. The 200 Areas Source OU contains approximately 450 waste sites and 210 unplanned releases (UPR) that require assessment activities. These waste sites and UPRs were associated with the spent fuel processing activities that occurred in the 200 Areas. Remediation of waste sites by engineered barriers form the basis for current cost baseline estimating, although some removal actions may be required. Barrier monitoring activities are currently taking place for the existing demonstration barrier in the 200-BP-1 OU.

The soil contamination from the liquid and solid wastes contain low-level through Tru-level radiological, low-level mixed wastes, and chemical constituents and will result in barriers covering approximately 5.7 million square meters. Groundwater (GW) contamination exists at various 200 Area Groundwater OUs and is addressed in a separate PBS (200 GW).

The planned remedial actions are designed to reduce the risk to the public workers and the environment by constructing engineered barriers to isolate the contamination in the 200 waste sites from the environment. These actions will be taken in accordance with a Record of Decision and support a land use of continued waste management activities in the 200 Area. The scope of the related deviation standard covers the management, planning, design field work, remedial action, and final documentation of the RA for the sites in this unit of analysis.

The previous 32 OU's have recently been recombined into 23 OU's as a result of streamlining activities in the 200 Areas that are nearing completion. Changes (Change Numbers M-13-97-01 and M-20-97-01) have been approved that incorporate the new 23 operable units into the TPA. A 200 Area RI/FS Implementation Plan which outlines a streamlined assessment and cleanup approach for the 23 operable units has also been finalized. This approach, including the revised operable units have not been incorporated into baseline (post FY 2001) at this time awaiting completion of the 200 Area RI/FS Implementation Plan.

WHAT ARE WE BUYING:

To date through FY02:

Continue 200 Area Assessment activities based on the current Detailed Work Plan, which incorporates the 23 new operable units (see below).

Incremental By Year:

FY 2000: 200-CW-1: Complete field characterization activities. Complete the RI report
200-BP-1: Continue prototype barrier monitoring and testing.
200-CS-1: Complete the RI/FS work plan with RCRA TSD unit sampling plan. Initiate field characterization activities.
200-CW-5 OU: Complete the RI/FS work plan.
200-TW-1: Initiate the RI/FS work plan.
200-TW-2: Initiate the RI/FS work plan.
200-PW-2 OU: Initiate the RI/FS work plan with RCRA TSD unit sampling plan.
200 Common: General support for 200 Area-wide activities including groundwater/Vadose Zone integration.

FY2001: 200-CW-1: Complete the FS Report.
200-CS-1: Complete the field characterization. Initiate the remedial Investigation report (RI).
200-CW-5: Initiate field characterization activities.

200-TW-1: Complete the RI/FS work plan. Complete field characterization activities and initiate the RI Report.

200-TW-2: Complete the RI/FS work plan. Complete field characterization activities.

200-PW-2: Complete the RI/FS work plan with TSD unit sampling plan. Initiate field characterization activities

200-PW-2: Complete the RI/FS work plan with TSD unit sampling plan. Initiate field characterization activities.

200-PW-4: Complete the RI/FS work plan with TSD unit sampling plan. Initiate field characterization activities.
200-PW-1: Initiate the RI/FS work plan.

200-CW-2: Initiate the RI/FS work plan.
200-LW-1: Initiate the RI/FS work plan.
200 Common:General Support for 200 Area-wide activities including Groundwater/Vadose Zone integration.

Target: No Activities supporting 200 Area Remediation Actions will proceed at the Target Funding level.

FY2002: 200-CW-1:Complete a proposed plan with proposed RCRA Permit modification. Complete confirmatory sampling plan. Initiate the RI/FS work plan.
200-CS-1: Complete the RI report and initiate the FS report with RCRA TSD closure plan.
200-CW-5: Complete field characterization and RI report. Initiate a FS Report.
200-PW-2: Complete field characterization activities.
200-PW-4: Complete the RI/FS work plan with TSD unit sampling plan. Complete field characterization activities. Initiate a RI report.
200-TW-1: Complete RI Report.
200-TW-2: Complete RI Report.
200-PW-1: Complete the RI/FS work plan.
200-CW-2: Complete the RI/FS work plan.
200-LW-1: Complete the RI/FS work plan.
200-MW-1: Initiate the RI/FS work plan.
200-PW-3: Initiate the RI/FS work plan.
200 Common: General support for 200 Area-wide activities including Groundwater/Vadose Zone integration.

Target: No Activities supporting 200 Area Remediation Actions will proceed at the Target Funding level.

FY2003: Continue Assessment activities; initiate Remediation activities based on acceptance of implementation plan and approved RODs.
Impact Adjustment: Complete assessment activities delayed from prior years; start of Remedial activitie will be delayed.

FY2004: Continue Assessment and Remediation activities based on approved RODs.

FY2005: Continue Assessment and Remediation activities based on approved RODs.

FY2006: Continue Assessment and Remediation activities based on approved RODs.

FY 2007: Continue Assessment and Remediation activities based on approved RODs.

Regulatory Drivers

These activities are required to support the following TPA enforceable milestones.

- M-13-19: Submit 200 North Pond Cooling Water Group RI/FS Work Plan;

- M-13-20: Submit Gable Mountain/B Pond and Ditch Cooling Water Group RI/FS Work Plan;

- M-13-21: Submit 200 Chemical Sewer Group RI/FS Work Plan;

- M-13-22: Submit U Pond/Z-Ditches Cooling Water Group RI/FS Work Plan;

- M-20-00: Submit Closure Plant/Post Closure Plans for all RCRA TSD Units 2/28/04;

- M-15-00: Complete the RI/FS process for all OU's 12/31/08;

- M-16-00: Complete remedial actions for all non-Tank Farm OU's 9/30/18;

- M-20-33: Submit Closure/Post Closure Plan for 216-A-10 Crib &. A-36B Crib;

- M-20-39: Submit Closure/Post Closure Plan for 216-S-10 Pond and Ditch;

- M-20-52: Submit Closure/Post Closure Plan for 216-A-37-1 Crib;

- M-20-53: Submit Closure/Post Closure Plan for 207-A Retention Basin;

- M-20-54: Submit Closure/Post Closure Plan for 241-CX Tank System;

Regulatory Compliance: The U.S. Department of Energy, Richland Operations Office will not be in compliance with the Tri-Party Agreement and/or the Recourse Conservation and Recovery Act of 1976 and subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 179 **PBS #:** RL-ER08 **Unit of Analysis:** 010

UAS Title: 200 ZP-1, ZP-2 Groundwater Remedial Action

Benefits Summary

This Unit of Analysis (UOA) is for the remedial action activities for the groundwater contamination in the 200-ZP-1 Groundwater Operable Unit (OU) which consists of the groundwater contamination that underlies the 200 ZP source OU's and CC14 soil contamination associated with the 200-ZP-2 OU. This area is located at the west end of the 200 National Priority List (NPL) Area located on the central plateau of the Hanford Site. Levels of low-level radiological and chemical contamination has entered the soil groundwater above regulatory standards. The groundwater contamination plumes underlie approximately 11 million square meters of the 200 ZP OUs. The contaminated soils for the 200 ZP OUs with the exception of 200-ZP-2 OU will be addressed in a separate UOA.

The remedial actions are designed to reduce the risk to the environment by removing principally CCl4 contaminated groundwater, reinjection of the treated groundwater, and disposal of the collected contaminants. Contaminated soils are being remediated by using a vapor extraction system. These actions will be taken in accordance with the interim Record of Decision and action memorandum currently in place and result in the containment and mass reduction of contaminants in the soil groundwater. The scope of the UOA covers the management, planning, design field work, remedial action, and final documentation of the RA for the 200 ZP OU's. This Remedial Action will continue through FY12, per the interim ROD and agreements with the Regulators; operation beyond FY12 will be evaluated/determined with the Regulators, and scope/cost adjustments will be made as required.

To date through FY02:
Hydraulic containment and mass removal of CC14 from the highest groundwater plume concentrations (>2000 ppb). Containment and mass removal in the vadose zone prevents further degradation of the aquifer and protects workers. Soil vapor extraction in the vadose zone is used to accomplish this task at a rate of 500 cfm 6 months a year. Hydraulic containment within the aquifer reduces plume migration within the 200 Area plateau. A groundwater pump and treat system is operated at approximately 200 gpm to achieve hydraulic control. The interim remedial action is scheduled to continue as required by the ROD through FY12.

Incremental By Year:
FY 2000:
Hydraulic containment and mass removal of CC14 from the highest groundwater plume concentrations (>2000 ppb). Soil vapor extraction in the vadose zone is used to accomplish this task at a rate of 500 cfm 6 months a year. A groundwater pump and treat system is operated at approximately 200 gpm to achieve hydraulic control.

FY2001: Pump and treat system at ZP-1 and ZP-2, continues routine operations.
FY2002: Pump and treat system at ZP-1 and ZP-2, continues routine operations.
FY2003: Pump and treat system at ZP-1 and ZP-2, continues routine operations.
FY2004: Pump and treat system at ZP-1 and ZP-2, continues routine operations.
FY2005: Pump and treat system at ZP-1 and ZP-2, continues routine operations.
FY 2006:Pump and treat system at ZP-1 and ZP-2, continues routine operations.
FY 2007: Pump and treat system at ZP-1 and ZP-2, continues routine operations.

TPA, DNFSB, OR CONSENT DECREE DRIVERS:
Sample monitoring wells (1244 Well Trips), laboratory analysis of samples, data input into Hanford Environmental Information System database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, begin development of new consolidated site-wide groundwater model, revise composite analysis, report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone.

Regulatory Drivers

Sample monitoring wells (1244 Well Trips), laboratory analysis of samples, data input into Hanford Environmental Information System database, interpretation of data, reporting of data, preparation/revision of groundwater monitoring plans, report results of hydrologic testing, operate and report results from the seismic monitoring array, begin development of new consolidated site-wide groundwater model, revise composite analysis, report after receiving HQ comments, and support installation of new monitoring wells for M-24 TPA Milestone.

Regulatory Compliance: DOE will not be in compliance with the TPA and/ or the RCRA Permit and subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 180 **PBS #:** RL-ER08 **Unit of Analysis:** 0M5

UAS Title: 200 UP Groundwater Remedial Action

Benefits Summary

The overall goal of the Hanford Site-wide Groundwater Remediation Strategy is to restore groundwater to its intended beneficial uses in terms of protecting human health and the environment. The strategy places a high priority on actions that protect the Columbia River and the near-shore environment from degradation caused by the inflow of contaminated groundwater. These actions are implemented according to the Hanford Past-Practice Strategy, which provides a pathway for performing accelerated interim remedial measures (IRMs) for those contaminant plumes that are considered to pose a risk to human health or the environment. In each operable unit (OU), limited field investigations (LFIs) and qualitative risk assessments (QRAs) were performed to determine whether a substantial risk is posed by contaminant plumes. Proposed plans (PPs) are then developed to summarize the preferred approach to remediation, followed by an interim record of decision (ROD) that specifies the requirements for that remedial action. The ROD is issued by the regulating agencies. Groundwater remediation is then performed in accordance with Tri-Party Agreement directives, consistent with various regulatory requirements. This Unit of Analysis is based on interim remedial measures and does not include final ROD/disposition activities. This Remedial Action will continue through FY00, per the interim ROD; operation beyond FY00 will be evaluated/determined with the Regulators, and scope/cost adjustments will be made as required.

The 200-UP-1 operable unit (OU) underlies the U Plant and S Plant Aggregate Areas that are located in the southern half of the 200 West Area of the Hanford Site. The OU addresses contamination identified in the aquifer soils and the groundwater within its boundary. Over 25 contaminants are known to have exceeded drinking water standards in the OU. The highest priority contaminants include uranium, technetium, carbon tetrachloride, and nitrate. Pump and treat technology will be utilized to remediate these plumes. A treatability test was completed to define the treatment technology. An Extraction well will be maintained to operate at a minimum of 50 gpm. Groundwater will be transferred via pipelines to the effluent treatment facility (ETF) for treatment and disposal.

To date through FY02: The extraction well operation for the accelerated interim remedial measures (IRM) for 200-UP-1 will be completed in FY00. This unit of analysis does not include any subsequent ROD/disposition activities.

Incremental By Year:

No new boreholes will be required and, water will be treated at the ETF.

Associated sampling, analysis, and the reporting are not included in this unit of analysis.

FY2000: The extraction well operation for the accelerated interim remedial measures (IRM) for 200-UP-1 will be completed in FY00. This unit of analysis does not include any subsequent ROD/disposition activities.

FY2001: TBD

FY2002: TBD

FY2003: TBD

FY2004: TBD

FY 2005: TBD

FY2006: TBD

FY2007: TBD

Regulatory Drivers

These activities are required to support TPA enforceable milestone M-24-36: Install one replacement RCRA well for the 216-U-12 Crib.

Regulatory Compliance

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 181 **PBS #:** RL-ER06 **Unit of Analysis:** 0M7

UAS Title: Historic Building Mitigation Project

Benefits Summary

The U.S. Department of Energy, Richland Operations Office (RL) initiated a new strategy that moved from project-by-project, building-by-building considerations to the development of a Historic Building Programmatic Agreement (PA). This PA provides a streamlined framework that governs the management of all Manhattan Project and Cold War Era properties on the Hanford Site; and guarantees that historic preservation requirements are expedited while ensuring that cleanup activities are not delayed. The Historic District Treatment Plan, required under Stipulation IV of the PA, directs the development of a comprehensive report, which will chronicle the uniqueness of the Hanford Site, its technology, and the people who worked here. The report is scheduled for draft completion on September 29, 2000. The objective is to mitigate property types rather than individual properties. This will be accomplished by writing a historic narrative for each property type and/or process that calls out changes, modification, adaptations, or adjustments in the property type or process over time. Selected buildings will then be factored into this narrative as they support, typify, or exemplify aspects of that history. An information guide will be provided that directs researchers to existing documentation, as well as data generated in support of the mitigation. Finally, the report will contain recommendations for future uses of properties selected in consultation with the public.

To date through FY02:

Final Drafts of the "Recommendations for Future Uses" and "Radiological Health and Safety" of Chapter 4 of the Hanford Site Manhattan Project and Cold War Era Historic District Final Treatment Report were issued. A final Draft of the Historic American Engineering Record documentation for the 105 C Reactor was delivered for review.

Chapter 1, "Historic Overview" of the Final Treatment Report will be written. This database will be finalized and the chapter completed from all materials gathered to-date. Draft chapters and site forms from FY99 will be distributed for comment. Historic artifact assessment walkthroughs will be conducted.

The draft Hanford Site Manhattan Project and Cold War Era Historic District Final Treatment Report will be complete, and the report will be finalized.

Incremental By Year:

FY 2000: Chapter 1, "Historic Overview" of the Final Treatment Report will be written. Resources for Chapter 3, "Guide to Resources" of the Final Report will be finalized and the chapter completed from all materials gathered to-date. Draft chapters and site forms from FY99 will be distributed through established RL public involvement procedures for comment. The draft Hanford Site Manhattan Project and Cold War Era Historic District Final Treatment Report will be completed. Historic artifact assessment walkthroughs will be conducted to complete the requirement.

FY2001: The Hanford Site Manhattan Project and Cold War Era Historic District Final Treatment Report will be finalized following receipt and incorporation of public comments received during the public comment period.

Target: No activities supporting the Historic Building Mitigation Project will proceed at the target funding level.

FY2002: Submit final report.

Target: No activities supporting the Historic Building Mitigation Project will proceed at the target funding level.

FY2003: N/A

Impact adjusted: The Hanford Site Manhattan Project and Cold War Era Historic District Final Treatment Report will be finalized following receipt and incorporation of public comments received during the public comment period.

FY2004: N/A

FY2005: N/A

FY 2006: N/A

FY2007: N/A

Regulatory Drivers

This work is governed by agreements with Regulatory Agencies.

Regulatory Compliance: The activities are required by the TPA and DOE orders. After completion of the cleanup activities the area would be in compliance.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 182 **PBS #:** RL-ER06 **Unit of Analysis:** 016

UAS Title: 200 Area Decontamination & Decommissioning [D&D], 233-S

Benefits Summary

Decontamination and decommissioning (D&D) of inactive facilities is required to allow completion of remedial actions and close-out of the 200 Area NPL site. The primary emphasis of the D&D program is to eliminate the potential human health and safety hazards associated with the surplus facilities. The 233-S Plutonium Concentration facility has been the subject of several previous incomplete decommissioning activities. Only partial cleanup of the facility has been achieved. The structure is deteriorating at an accelerated rate due to the rapid freeze/thaw weather conditions experienced at Hanford over the last few years. To eliminate increasing potential for an accidental release to the environment from structural failure, this project plans to remove the major fissile material inventory and remove and dispose of the structure. The 233-S project is being conducted as a "D&D under CERCLA" pilot project with DOE-HQ.

The 200 Areas will be a waste management area for the foreseeable future. As such, the primary concern with the surplus facilities will be the protection of the workers and environment. Public access to the 200 Areas will be very restricted as long as institutional controls remain. It is anticipated the majority of the 200 Area facilities will be placed in long term Surveillance and Maintenance. This project contributes to the transition of the central plateau in support of long term waste management at Hanford.

Due to the nature and extent of contamination within the 233-S facility, the decontamination and decommissioning must be performed in a very meticulous manner.

To Date through FY02:

The 233-S facility ventilation system has been repaired and modified. Radiological surveys have been performed and decontamination and stabilization activities have been accomplished. Facility characterization studies and reports were completed. Project Management Assessments were completed in preparation for the Operations Readiness Review (ORR).

The successful completion of the "phased approach" ORR authorized Process Hood isolation work in the Load Out Hood and Pipe Trench. Follow-on Focused Readiness Assessment was performed to review work plans for removal of PMMA panels, decontaminating and dismantling the Process Hood, installation of a portable exhauster, and removal of ductwork.

The removal of 625 lineal feet of utility, plutonium, and neptunium product piping along with dismantlement of the load out hood effectively isolated the concentration process vessels from REDOX facility and other external influences.

The supply and exhaust ducting on the roofs of the 233-S and the 233-SA buildings will be removed and packaged for disposal.

All instruments, equipment and plumbing will be removed from the viewing room of the process hood.

The process hood vessels and equipment will be removed and packaged. Other activities include the removal of remaining piping, valves, plates, walkways, etc. from the process hood.

A second portable exhauster will be brought to the site as a backup exhauster. Utilization of this unit will allow the decontamination and decommissioning of the 233-SA Exhaust Facility. The internal equipment of 233-SA will be removed and the surfaces decontaminated in preparation for dismantlement.

Investigative equipment will be used to determine if the below grade filter box is filled with sand. Once the investigation is complete, plans will be developed and clean-out/decontamination completed.

The Initial work packages will be developed to support the dismantlement of the Process Cell and 233-SA building.

Incremental By Year:

FY2000: The supply and exhaust ducting on the roofs on the
233-S and the 233-SA buildings will be removed and packaged for disposal. All instruments, equipment and

233-S and the 233-SA buildings will be removed and packaged for disposal. All instruments, equipment and plumbing will be removed from the viewing room of the process hood. During all operations, strategic sampling and analysis will support least cost disposal options. Removal of PMMA panels, remaining piping, valves, plates, walkways, etc. from the viewing room/process hood area. Preparation for removal of process system vessels and piping systems will be initiated.

FY2001: Continuation of the process hood vessels and equipment dismantlement, removal and packaging for disposal. During all operations continuous sampling and analysis will support least cost disposal options.

FY2002: Completion of the process hood vessels and equipment dismantlement, removal and packaging for disposal. Installation of a second (backup) portable exhauster to allow for decontamination and decommissioning of the 233-SA Exhaust Facility. Boroscope investigation and Non-destructive assay (NDA) of the sub-grade filter box to determine accurate inventory of housing prior to decontamination. Clean out and decontamination of Filter Box. The initial work packages will be developed to support the dismantlement of the Process Cell and 233-SA building. The internal equipment of 233-SA will be removed and the surfaces decontaminated in preparation for dismantlement.

FY2003: After completion of the process system vessel dismantlement, the stainless steel floor pan will be removed and a final decontamination/fixative will be applied. Perform a radionuclide inventory screening through the USQ process to downgrade the radiological classification of the facility.
Selected decontamination of the interior wall, ceilings, and floors of the 233-S will be preformed to meet waste acceptance criteria.

The 233-SA building will be dismantled and properly disposed.
The facility drainage system for the 233-S and the 233-SA buildings will be removed, soil samples will be taken and removed
for disposal as necessary.

The Initial work packages will be developed to support the dismantlement of 233-S building and laydown trench.

FY2004: The roof, wall and floor sections of the 233-S facility will also be cut and individually removed for disposal. The process hood will be segmented through diamond wire cutting. The Initial work packages will be developed to support the concrete slab/facility footer removal and operational activities initiated.

FY2005: The remaining concrete slabs and footers will be sampled and removed for disposal. A final radiation survey of facility site and statistical soil sampling will be performed. Any soil determined to be contaminated, underneath the building will be removed and prepared for disposal. The remaining area will be filled with clean fill and graded to match the surrounding terrain. Project site will be demobilized. Final characterization and project reports will be developed and issued.

FY2006: N/A

FY2007: N/A

Regulatory Drivers

This work is in support of enforceable TPA milestone M-16-00: "Remedial Designs/Remedial Actions" Complete by 9/30/18.

Regulatory Compliance: The activities are required by the TPA and DOE orders. After completion of the cleanup activities the area would be in compliance.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 183 **PBS #:** RL-ER06 **Unit of Analysis:** 0LE

UAS Title: 224-B Facility D&D

Benefits Summary

Decontamination and decommissioning (D&D) of inactive facilities is required to allow completion of remedial actions and close-out of the 200 Area NPL site. The primary emphasis of the D&D is to eliminate the potential human health and safety hazards associated with the surplus facilities. The 224-B Plutonium Concentration facility is classified as a nuclear facility, due to its residual inventory of radionuclides. This facility has been the subject of several previous incomplete decommissioning activities. Only partial cleanup of the facility has been achieved. The structure is deteriorating at an accelerated rate due to the rapid freeze/thaw weather conditions experienced at Hanford over the last few years. To eliminate increasing potential for an accidental release to the environment from structural failure, this project plans to remove the major fissile material inventory and remove and dispose of the structure. The 224-B project will be conducted as a D&D under CERCLA pilot project with DOE-HQ.

The 200 Areas will be a waste management area for the foreseeable future. As such, the primary concern with the surplus facilities will be the protection of the workers and environment. Public access to the 200 Areas will be very restricted as long as institutional controls remain. It is anticipated that the majority of the 200 Area facilities will be placed in long term Surveillance & Maintenance.

WHAT ARE WE BUYING:
BENEFITS SUMMARY:

Decontamination and Decommissioning (D&D) of the 224B Plutonium Concentration building will mitigate this urgent risk to personnel and the environment (DOE/RL-96-105, Vol.1, Rev. 3, Richland Environmental Restoration Project Baseline Multi-Year Work Plan). This action is required to complete TPA Milestone M-16-00, "Remedial Design/Remedial Actions Complete by 9/30/18, and will also provide support to the closeout of the 200 Area NPL site. This action is planned to be performed under CERCLA.

Continued progress and lessons learned while performing D&D work in highly contaminated, nuclear facilities is essential to mitigating the risks presented by the Hanford Site. The transition of decommissioning activities from 233-S to 224B will draw upon those experienced personnel to plan and perform this work and end up building a large pool of experienced personnel.

To date through FY02:

FY 2000: Preliminary plans and regulatory evaluations will be completed to provide a starting point for D&D of this facility. Collection of historical documents, characterization planning (Data Quality Objectives; Sampling and Analysis Plan), and an Engineering Evaluation/Cost Analysis will be prepared to help determine the scope of work.

A study of the existing ventilation system will be performed culminating in a new ventilation system design to support D&D of the facility.

Incremental By Year:

FY2001: Collection of samples as outlined in the Sampling and Analysis Plan will be performed to support preparation of a detailed remediation cost estimate in FY 2002.

Installation of the new ventilation system will be completed during this year, with acceptance testing in FY 2002.

A Removal Action Workplan (RAW) will prepared to develop the scope of work outlined in the EE/CA decisional document, the Action Memorandum.

FY 2002: Acceptance testing of the ventilation system will be completed. Preparation of a Safety Analysis Report (SAR) will be initiated based upon the decommissioning scope of work presented in the RAW.

A detailed remediation cost estimate will be completed and mobilization to the site will be completed.

FY 2003: Initiate gallery decommissioning to remove industrial hazards (asbestos, mercury, process chemicals).

FY 2004: Complete gallery decommissioning, and decontaminate canyon surfaces (floors, vessels and piping)

FY 2004: Complete gallery decommissioning and decontaminate canyon surfaces (floors, vessels and piping).

Initiate secondary mobilization to support canyon decommissioning and transfer of manual labor from 233-S.

FY 2005: Complete secondary mobilization and commence canyon decommissioning.

FY 2006: TBD

FY 2007: TBD

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS: N/A

Regulatory Compliance: The activities are required by the TPA and DOE orders. After completion of the cleanup activities the area would be in compliance.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 184 **PBS #:** RL-VZ01 **Unit of Analysis:** 09E

UAS Title: Groundwater/Vadose Zone Integration

Benefits Summary

The Hanford Site environmental legacy represents one of the most complex technical, regulatory, and public policy challenges facing the nation. Past operations at the Hanford Site resulted in radiological and chemical contamination of soils (vadose zone), groundwater, and the Columbia River. While progress is being made, individual cleanup project decisions and goals (end points) do not necessarily lead to a technically defensible and publicly acceptable end state.

Funding this UAS maintains the U.S. Department of Energy (DOE) commitment of establishing the Hanford Site Groundwater/Vadose Zone (GW/VZ) Integration Project (Integration Project) to assure the protection of water resources, the Columbia River environment, river-dependent life, and users of Columbia River resources. DOE Undersecretary Moniz directed that the project be science-based, that it include strong participation from the DOE national laboratories, and that it incorporate a multi-tiered peer review process.

The Integration Project will:

-Integrate all Hanford Site GW/VZ related work scope.

-Predict current and future impacts resulting from contaminants that have been (or are predicted to be) released to the soil column at the Hanford Site.

-Provide a sound science and technology basis for site decisions and actions.

-Promote the open and honest involvement of Tribal Nations, regulators, and stakeholders so that Project outcomes reflect expressed interests and values.

-Establish an independent technical peer review.

To date through FY02:

Integration - The Integration Project will establish a consistent and integrated approach for characterization, assessment, and remediation activities for all Hanford Site GW/VZ projects. Formal procedures, baseline scope documents, schedules and estimates will be prepared to support the integration process.

Science and Technology (S&T) - Prepare and implement a 'Roadmap' for new and ongoing research in meeting characterization and assessment needs.

System Assessment Capability (SAC) - This scope will provide the tools to assess the impacts of all Hanford Site waste forms, in support of Project cleanup decisions. SAC development will be an iterative process; the initial set of assessment parameters, the system architecture and design requirements will be revised as information and understanding of the technical elements evolves.

Public Involvement - Continued open and inclusive public involvement that provides meaningful and acceptable ways for regulators, stakeholders, Tribal Nations and the public to participate.

Peer Review - Continue to build on the use of the Expert Panel to improve the acceptability and credibility of the Integration Project's work and ensure timely discussion of technical issues.

Incremental By Year:

FY2000:

Integration - The Integration Project will continue to establish a consistent approach for characterization, assessment, and remediation activities for all Hanford Site GW/VZ projects. Formal procedures, baseline scope documents, schedule and estimated will be prepared to support the integration process.

Peer Review - Continue to interface eight-member expert panel. Reviews, including merit and technical of Science and Technology Plans and Roadmaps, Prioritization of Initiatives, System Assessment Capability, Technical Elements and modeling

Elements and modeling.

Public Involvement - Continue weekly meetings, regional workshops, website update, attendance at HAB meetings, a formal public involvement plan, information/fact sheets to provide status and progress.

System Assessment Capability - Initial testing will include a quantitative, site-wide analysis capability, key or primary radionuclides and hazardous chemicals, and available risk assessment capabilities for human health, ecosystem, cultural and socioeconomic impacts.

Science and Technology - Continue to implement the S&T Plan, ensuring technical responsiveness and quality of S&T work, interfaces between National Labs and the Project to infuse science, and maintain interfaces with National Programs providing S&T.

FY2001:

Integration - Continue strengthening involvement of the 'core' projects through review of MYWP DWP, baseline change process, etc.

Peer Review - Continue meetings with the eight-member expert panel on topics such as Science and Technology Plan and Roadmaps, Prioritization of Initiatives, System Assessment Capability, Technical Elements and modeling.

System Assessment Capability - Continue testing will include a quantitative, site-wide analysis capability, key or primary radionuclides and hazardous chemicals, and available risk assessment capabilities for human health, ecosystem, cultural and socioeconomic impacts.

Science and Technology (S&T) - Continue to implement the S&T Plan, ensuring technical responsiveness and quality of S&T work, interfaces between National Labs and the Project to infuse science, and maintain interfaces with National Programs providing S&T.

Public Involvement - Continue weekly meetings, regional workshops, a web site, attendance at HAB meetings, a formal public involvement plan, information/fact sheets, etc. to provide status and communicate about the Project.

FY2002: Continue Project efforts in site-wide integration, Public Involvement, peer review, S&T and SAC.

FY2003: Continue Project efforts in site-wide integration, Public Involvement, peer review, S&T and SAC.

FY2004: Continue Project efforts in site-wide integration, Public Involvement, peer review, S&T and SAC.

FY2005: Continue Project efforts in site-wide integration, Public Involvement, peer review, S&T and SAC.

FY2006: Continue Project efforts in site-wide integration, Public Involvement, peer review, S&T and SAC.

FY2007: Continue Project efforts in site-wide integration, Public Involvement, peer review, S&T and SAC.

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS: N/A

Regulatory Compliance: Groundwater Management monitoring consists of groundwater, vadose, and seismic monitoring activities, along with the groundwater modeling necessary to support long-term landlord surveillance and maintenance responsibilities at the Hanford Site. These activities are part of the minimum safe operations and are required by the TPA and DOE orders. These Groundwater activities will be conducted to meet regulatory requirements, agreements, and DOE orders.

Programmatic Driver (Peer Rvw Category): 3

DOE Priority: 185 **PBS #:** RL-TP04 **Unit of Analysis:** 01Q

UAS Title: 300 Area/SNM - Waste Acid Treatment System (WATS) RCRA

Benefits Summary

This UAS contained activities to support the closure of Resource Conservation and Recovery Act (RCRA) Waste Acid Treatment System and scheduled to be completed in FY 2000.

SIGNIFICANT CHANGES FROM FY2001-2002

This UAS will be complete in FY 2000.

DOE Priority: 186 **PBS #:** RL-TP04 **Unit of Analysis:** 104

UAS Title: 300 Area/SNM - 303K RCRA

Benefits Summary

It is assumed that the workscope for 303K building demolition Resource Conservation and Recovery Act (RCRA) will be funded and completed in FY 2001 to avoid permit violations. This workscope includes the demolition of the 303K Building, which will allow for the final closure of this Treatment Storage & Disposal (TSD) unit. Funding this work scope supports the overall project mission to complete deactivation of the 300 Area/SNM sub-project by the end of FY 2002.

SIGNIFICANT CHANGES FROM FY2001-2002

Assuming that this UAS is funded in FY 2001 and completed, this activity will not be funded in FY 2002. Therefore, no funding would be required in FY 2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 187 **PBS #:** RL-TP13 **Unit of Analysis:** 2NU

UAS Title: L-297, Equipment Disposition Project

Benefits Summary

This UA provides disposition of legacy radiologically contaminated heavy mobile and rail equipment on a priority basis. Approximately 60 pieces of contaminated legacy equipment were identified for disposition since the inception of the Equipment Disposition Project (L-297) in FY 1995. Of these, approximately 25 to 30 pieces of equipment will require disposition between FY 2002 and beyond (originally planned to complete in FY 2006, but prior year funding levels has delayed completion for up to 5 to 10 years). This UA completes in FY 2001and the remaining workscope is transferring to UA 2TW, "L-297, Equipment Disposition Project - Incremental" under "Other Cleanup".
SIGNIFICANT CHANGES FROM FY 2001- 2002:
This UA has no activity in FY 2002 because the workscope is being transferred to the "Other Cleanup Case" and is described in UA 2TW. The effort to complete the disposition of this equipment is require to meet regulators expectations.
CONNECTIVITY FROM UAS TO PBS END POINTS:
This UA contributes to the accomplishment of the PBS end point by providing timely disposition of contaminated legacy equipment.

Regulatory Drivers

There are no TPA, DFNSB or consent decree drivers associated with this activity at this time. However, this activity is essential to support the completion of numerous TPA, DNFSB, and consent decree drives related to the handling and transport of waste on the Hanford Site.

DOE Priority: 190 **PBS #:** RL-ER05 **Unit of Analysis:** 09K

UAS Title: 200 Area Canyon Disposition Initiative

Benefits Summary

The Canyon Disposition Initiative will determine the final disposition of the five major chemical processing facilities (canyons) at Hanford (A,B,S,T, and U). The CDI is evaluating the feasibility of utilizing the canyons as an asset for disposal of low level wastes instead of being a mortgage liability. The 221-U (U Plant) was selected as a pilot project to determine the final disposition for the canyons. A Data Quality Objective process with the regulators was conducted to identify data needs for the continued evaluation of the canyons under the CERCLA process. The characterization will be conducted in a phased approach: field observation, technology integration, structural sampling, and field sampling. The final end-state of the canyons is required to allow completion of remedial actions and closeout of the 200 Area National Priority List (NPL) site. The CDI is being conducted as a jointly funded project between EM-30, EM-40, and EM-50, and with support from the US EPA and Washington Department of Ecology.

The 200 Area will be a waste management area for the foreseeable future. As such the primary concern with the surplus facilities will be with the protection of the workers and environment. Public access to the 200 Areas is very limited as along as institutional controls remain.

WHAT ARE WE BUYING:

To date through FY02:

The CDI will define the end-state of the canyon facilities in the 200 Area. This will impact the decisions for the ancillary facilities and waste sites within the immediate area of the canyons and could define the overall approach for the 200 Area NPL Site.

Incremental By Year:

FY 2000: Initiation of a Phase II Feasibility Study to determine preferred alternative(s), continue performance assessment to integrate with Feasibility Study, support record of decision development, continue engineering technology evaluation to support Feasibility Study, and continue technology integration with EM-50.

FY2001: Complete feasibility study, complete performance assessment and engineering technology evaluations, and complete record of decision support activities to reach end state decision for U Plant facility.

Target: No activities supporting the CDI effort will be performed at the Target Funding level

FY2002: Obtain record of decision and complete share holder involvement process.

Target: No activities supporting the CDI effort will be performed at the Target Funding level.

FY2003:

Impact adjusted: Complete feasibility study, complete performance assessment and engineering technology evaluations, and complete record of decision support activities to reach end state decision for U Plant facility.

FY2004:

FY2005:

FY 2006:

FY-2007:

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS: N/A

Regulatory Compliance: The activities are required by the TPA and DOE orders. After completion of the cleanup activities the area would be in compliance.

Programmatic Driver (Peer Rvw Category): 7

DOE Priority: 206 **PBS #:** RL-TP13 **Unit of Analysis:** 2TP

UAS Title: Water Utility Projects and Replacements - Incremental

Benefits Summary

This UA provides incremental essential Water Utility projects and equipment replacements that are not funded in the target case UA 0C6, "Water Utility Projects and Replacements". This incremental UA provides the timely and cost effective major maintenance, renovation, modernization, and upgrade of the Hanford Site Water Utility Systems. In FY 2002 the major emphasis will be continuation of projects that reduces the backlog of Water Projects. Water leaks are occurring at an accelerating rate in the outer area water system serving the 200 Area due to the age of this system (majority of system is 50 years old). These water leaks are occurring in lines that run through contaminated areas, which is causing the accelerated migration of contaminates through the Vadose Zone to the ground water and ultimately the Columbia River. The Landlord Project has been working with the Hanford Site Groundwater/Vadose Zone Integration Project since FY 1999 to develop a priority list of water projects. These projects are being planned on a priority basis to replace aging water lines and equipment that minimizes the migration of contaminates in the Vadose Zone, renovates, modernizes, and upgrades the Hanford Water Systems to meet the Site mission needs to 2046 (current End Point of Site Mission). The backlog of water system improvement projects requires incremental funding between FY 2000 and 2006 to address these issues. The following FY 2002 incremental water projects are planned:
L-334, "Install Remote Operated Isolation Valves" (for the Outer Area Export Water System)
L-302, "Outer Area Export Water Control System Upgrade"
L-301, "300 Area Water Control System Upgrade"
L-327, "Replace Oversized Export Water Pumps"
L-328, "Refurbish 382C and 382D Ground Tanks" will refurbish the large, aging 300 Area fire protection water storage tanks to meet continued service requirements in the 300 Area.
SIGNIFICANT CHANGES FROM FY 2001-2002:
This is a new UA for FY 2002 that funds incremental Water Utility Systems requirements not funded in UA 0C6. The increase from FY 2001 to 2002 is due to the backlog of Water Utility projects and equipment replacements that are planned on a priority basis. Infrastructure needs and requirements are continuing to increase due to the aging infrastructure and prior year funding support has not keep pace with these needs.
CONNECTIVITY FROM UAS TO PBS END POINTS:
This UAS contributes to the accomplishment of the PBS end point by providing timely renovation, modernization, upgrades, and replacements to essential Utility Systems, thereby extending the life cycle of these systems in support of the Site mission. The overall goal of this PBS, supported by this UA, is to provide a safe, environmentally compliant, and cost effective infrastructure to support the Site cleanup mission through 2046.

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 207 **PBS #:** RL-ER06 **Unit of Analysis:** 1YQ

UAS Title: DR Reactor Interim Safe Storage (ISS) Increment

Benefits Summary

This Unit of Analysis is an incremental adjustment to UOA ER-06 (OBE).
The majority of the 100 Area surplus facilities and waste sites are located within a half mile of the Columbia River. The Columbia River is currently being considered for a Wild and Scenic designation by Congress and is currently utilized, along the Hanford Site, for recreational purposes by the public. Cultural resources have been identified in areas along the river. Nesting grounds for endangered/threatened species are also located in this area. The land in the 100 Areas is ceded Tribal land and is of interest to local government and private groups for economic and recreational development. There are two potential pathways for exposure and injury: 1) contamination migrating off-site through the air, and 2) direct contact with the facilities resulting in exposure or injury.

Decontamination and decommissioning (D&D) of the 100 Area inactive facilities is required to allow completion of remedial actions and close-out of the 100 Area National Priority List (NPL) site. The Interim Safe Storage (ISS) of the 105-DR Reactor is the first phase of the disposition alternative selected in the Surplus Reactor EIS-ROD signed in 1993. ISS will reduce the footprint of the reactor complex by 75% to the primary shield wall that surrounds the graphite block, remove all the remaining attached structures, including the fuel storage basin (empty) and seal all openings so that the facility is in an environmentally safe and secure condition. ISS will reduce the risk to workers required to conduct S&M, minimize the threat of intrusions, and reduce the potential for contaminant spread from the facility. The ISS of the 105-DR began in FY99 and is planned for completion within the ten year planning period.

To date through FY02:

This Unit of Analysis assumes continued closure funding through FY 2005. In support of the goal to accelerate 100 Area completion, the Interim Safe Storage (ISS) of DR Reactor on the River, includes the following through FY2002:

. Complete hazardous material removal inside the SSE. Complete pipe and equipment removal outside the RX building.

. Demolish the below grade structure

. Complete hazardous material removal in the SSE

. Complete below grade structural demolition, sampling and analysis, and backfill

Incremental By Year:

FY2002: Complete hazardous material removal in the SSE
Complete below grade structural demolition.
Complete sampling analysis/RESRAD studies

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

This work is required to support enforceable TPA milestone M-93-16: Complete 105-DR Interim Safe Storage.

Regulatory Compliance: The activities are required by the TPA and DOE orders. A major noncompliance would not occur for several years, therefore the risk is moderate to low. After completion of the cleanup activities the area would be in compliance.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 208 **PBS #:** RL-ER06 **Unit of Analysis:** 1Y4

UAS Title: F Reactor Interim Safe Storage (ISS) Increment

Benefits Summary

This Unit of Analysis is an incremental adjustment to UOA ER-06 (OBD).
The majority of the 100 Area surplus facilities and waste sites are located within a half mile of the Columbia River. The Columbia River is currently being considered for a Wild and Scenic designation by Congress and is currently utilized, along the Hanford Site, for recreational purposes by the public. Cultural resources have been identified in areas along the river. Nesting grounds for endangered/threatened species are also located in this area. The land in the 100 Areas is ceded Tribal land and is of interest to local government and private groups for economic and recreational development. There are two potential pathways for exposure and injury: 1) contamination migrating off-site through the air, and 2) direct contact with the facilities resulting in exposure or injury.

Decontamination and decommissioning (D&D) of the 100 Area inactive facilities is required to allow completion of remedial actions and close-out of the 100 Area National Priority List (NPL) site. The Interim Safe Storage (ISS) of the 105-F Reactor is the first phase of the disposition alternative selected in the Surplus Reactor EIS-ROD signed in 1993. ISS will reduce the footprint of the reactor complex by 75% to the primary shield wall that surrounds the graphite block, remove all the remaining attached structures, including the fuel storage basin, and seal all openings so that the facility is in an environmentally safe and secure condition. The fuel storage basin is currently filled with dirt, debris and unknown hardware. ISS will reduce the risk to workers required to conduct S&M, minimize the threat of intrusions, and reduce the potential for contaminant spread from the facility. The ISS of the 105-F started in FY98 and is planned for completion by the end of FY03.

Incremental By Year:

FY2002:

Complete SSE facility installation (assumes continued closure funding in FY00/01).

Regulatory Drivers

This work is required to support enforceable TPA milestone M-93-11: Complete 105-F Interim Safe Storage.

Regulatory Compliance: The activities are required by the TPA and DOE orders. A major noncompliance would not occur for several years, therefore the risk is moderate to low. After completion of the cleanup activities the area would be in compliance.

Programmatic Driver (Peer Rvw Category): 1

RL FY2002 BUDGET FORMULATION

DOE Priority: 209 **PBS #:** RL-ER06 **Unit of Analysis:** 1ZA

UAS Title: B- Reactor Feasibility Study Increment

Benefits Summary

This Unit of Analysis is an incremental adjustment to UOA ER-06 (09J).
The U. S. Department of Energy, Richland Operations Office (RL) initiated a new strategy that moved from project-to-project, building-by-building historical mitigation considerations to the development of a Historic Building Programmatic Agreement (PA). This PA provides a streamlined framework that governs the management of all Manhattan Project and Cold War Era properties on the Hanford Site; and guarantees that historic preservation requirements are expedited while ensuring that cleanup activities are not delayed.

The 105-B Reactor Building is currently being used as a limited access historical reference/landmark. In 1995, BHI issued a report on the feasibility of converting the building into a museum. The study was conducted to define the activities necessary to upgrade the building to a museum, evaluate the technical feasibility of these activities and examine the cost effectiveness of these actions versus dismantling and evaluation options that would improve B Reactor as a museum attraction.

The Historic Museum Committee and RL will determine the needed work scope for the inclusion, preservation, and restoration of the 105-B Museum Facilities.

WHAT ARE WE BUYING:

To date through FY02:

A facility hazard and characterization assessment will be developed. This will support the Phase II Feasibility Study. A Surveillance and Maintenance Plan will be developed for long term S&M. The findings of the feasibility study will be addressed to allow for the development of the B Reactor as a museum.

Incremental By Year:

FY2002: Activities will continue on preserving the B Reactor in support of developing the museum.

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

This work is required to support enforceable TPA milestone M-93-05: Issue B Reactor Phase II Feasibility Study Engineering Design Report for public comment.

Regulatory Compliance: These programmatic activities are required to support the historic preservation strategy for the Hanford Site.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 210 **PBS #:** RL-ER01 **Unit of Analysis:** 1WC

UAS Title: 100 BC Source Remedial Action Increment

Benefits Summary

This Unit of Analysis is an incremental adjustment to UOA ER-01(OOJ).
The 100-BC Area is one of six reactor areas located in the 100 Area along the Columbia River. The 100-BC Area includes two source operable units (OUs) 100-BC-1 and 100-BC-2, and one independent (IU) designated as 100-IU-1.

The 100-BC-1 and 100-BC-2 OUs contain radiological and mixed waste sites, including 105-B and 105-C Reactor buildings. The two source OUs received several types of liquid effluent, decontamination waste streams, and miscellaneous liquid and solid wastes. Liquid waste discharged to 100-BC-1 and 100-BC-2 OUs totaled approximately 51 million gallons. Solid wastes totaled approximately 32,000 cubic yards.

The reactor area source OUs were assessed and are being remediated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Interim action Records-of-Decision (RODs) were issued to expedite the cleanup process. Sites near the Columbia River are being remediated first, to be followed by sites near the reactor buildings.

Remediation of waste sites in 100-BC-1 and 100-BC-2 involves excavation, disposal of waste in the Environmental Restoration Disposal Facility, backfill and site closeout. Remaining assessment activities are being addressed on an area-wide basis in the 100-HR source remedial action UOA. Remedial action for liquid waste sites will be complete in FY 2000 and remedial design for solid waste sites will be conducted as part of the 100-KR source remedial action UOA and completed in FY 2004. Remedial action for pipelines will begin in FY 2001.

100-IU-1 includes seven waste sites, upstream of the 100-BC reactor area, that were addressed via CERCLA removal actions. A Record-of-Decision was issued indicating "No Further Action" is necessary at this OU.

What are we buying (through FY02):
. Remediation of 19 waste sites and removal of 875K tons of contaminated soil and solid waste through FY 2001.
. Clean up over 25,000 linear feet of process effluent pipelines from the B and C Reactors.
. Completion of remedial design for the solid waste burial grounds and remaining sites.
. These activities are required to support TPA enforceable milestone M-16-26B:(Complete remediation and backfill of 51 waste sites)and milestone M-16-00A: (Complete all 100 area remedial actions).

FY 2002: Complete 100-B/C Pipelines remediation effort and 2 waste sites.
Impact Adjustment: Initiate 100-B/C Pipeline remediation effort. Complete 100- B/C Pipelines remediation effort and 2 waste sites.

Regulatory Drivers

These activities are required to support TPA enforceable milestone M-16-26B: (Complete remediation and backfill of 51 waste sites, M-16-00A: (Complete all 100 area remedial actions).

Regulatory Compliance: If not completed DOE will not be in compliance with the TPA and/ or the RCRA Permit and may be subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 211 **PBS #:** RL-ER04 **Unit of Analysis:** 1XJ

UAS Title: Environmental Restoration (ER) Disposal Facility Increment

Benefits Summary

This Unit of Analysis is an incremental adjustment to UOA ER-04 (OWM).
The Environmental Restoration Disposal Facility (ERDF) is a landfill for disposal of CERCLA remediation wastes from the 100 and 300 Area remedial actions, decontamination and decommissioning, and deactivation of surplus facilities. ERDF is a RCRA compliant facility authorized under CERCLA. It is located in the 200 Area and is designed for construction in a phased approach, so that the capacity can be aligned with waste volumes being produced. Final closure of filled cells is also planned during the baseline period.

To date through FY02:

. Design and construction of additional facility capacity (Cells 3&4).
. These activities support TPA enforceable milestones assigned to remedial action in the 100 and 300 Areas and should be considered essential services.
. These activities also support site D&D activities.

Incremental By Year:

FY2002: Transport and dispose of remediation waste.

Regulatory Drivers

This work is governed by enforceable TPA milestone M-16-92B: ERDF Cells 3&4 ready to accept remediation wastes.

Regulatory Compliance: This activity is required for implementation of the 100 and 300 Area Remedial Actions and is required by the TPA and DOE orders.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 212 **PBS #:** RL-ST01 **Unit of Analysis:** 0V8

UAS Title: PNNL WASTE OPERATIONS & MANAGEMENT - LEGACY WASTE - Increment

Benefits Summary

Provides incremental funding for management and disposal of EM's legacy waste mortgage at DOE facilities and ground contamination sites assigned to PNNL.

Funding this UAS in FY 2002 provides continuing management and disposal of EM's legacy waste mortgage at DOE facilities and ground contamination sites assigned to Pacific Northwest National Laboratory (PNNL). The wastes being managed under this Legacy Waste UAS were abandoned in place and their program sponsors no longer exist. These legacy wastes are the responsibility of EM to manage in accordance with the cleanup of the Hanford site. PNNL has been assigned the responsibility to manage wastes within certain DOE facilities and ground contamination sites and to resolve complex environmental and waste management issues. This UAS directly supports the DOE-EM mission for Hanford Site cleanup and the end state for remediation of all EM legacy waste and contamination vulnerabilities and revitalization of the 300 Area. Approximately 2 cubic meters of TRU waste, 6 cubic meters of MLLW, and 10 cubic meters of LLW would be dispositioned during the fiscal year.

SIGNIFICANT CHANGES FROM FY 2001-2002:
The funding changes from FY 2001 to FY 2002 are due to the varied scope of assorted legacy waste cleanup projects that have been identified and prioritized for completion as funds are made available in accordance with Site priorities.

CONNECTIVITY FROM UAS TO PBS END POINTS:
This UAS is critical to the accomplishment of the PBS endpoint -- full transition of DOE Cold War legacies currently assigned to PNNL to EM for remediation -- by actual disposition of legacies at PNNL.

DESCRIPTION:

The scope of this project in FY 2002 includes the following:
--provide remediation of Legacy Concerns classified as excess nuclear materials (special case wastes-SCW)
--provide remediation of containerized materials (i.e., materials already characterized and placed in a container)
--remove the residues and solutions contained in the 18 HLRF B-Cell tanks in the Radiochemical Processing Laboratory (RPL).

Regulatory Drivers

The work scope within this UAS is required by the following: Tri-Party Agreement milestone M-92-12 and M-92-13 (supporting); Federal environmental statute or regulation (including permits): RCRA (40 CFR 260-270); Hanford Facility RCRA permit WA 7890008967; NESHAPS; DOT (49 CFR); TSCA; and State or local statute or regulation (including permits): Washington Administrative Code (WAC) 173-303.

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

The TPA drivers are M-92-12 and M-92-13 concerning disposition of all 300 Area special case wastes. There are no DNFSB or other Consent Decree drivers associated with this activity at this time.

DOE Priority: 214 **PBS #:** RL-WM05 **Unit of Analysis:** 081

UAS Title: 340 Facility Shutdown

Benefits Summary

This unit of analysis provides for the shutdown and cleanout of the 340 Facility. The work included is over and above the minimum safe operation, maintenance, and engineering support required for the 340 Facility. The 340 Facility Deactivation Project Management Plan describes the work to be performed. In FY 2002, the radioactive liquid waste transfer lines will be flushed, solids in the vault tanks will be removed, contaminated surfaces will be cleaned, and any remaining contamination stabilized.

Significant Changes from FY 2001-2002

This activity was unfunded in FY 2001 at the target level. The work described in the Project Management Plan is scheduled over three years of which FY 2002 is the first year.

Connectivity from UAS to PBS End Points

The life-cycle planning for the project includes shutdown and cleanout of each of the Liquid Effluent facilities at the end of operation. The Liquid Effluent Project itself has no interim or final end point targets.

Regulatory Drivers

Cleanout of the 340 Facility must be completed by 9/30/2006 to satisfy the TPA milestone M-92-16.

DOE Priority: 215 **PBS #:** RL-TP08 **Unit of Analysis:** 0CB

UAS Title: 327 Liquid Waste Handling System

Benefits Summary

The work scope associated with the 327 Liquid Waste Handling System is the design, procurement, installation and testing of the LWHS. Currently the 327 Facility does not have the capability to handle, treat and dispose of radioactive liquid waste. The deactivation of the facility will require the use of water or other decontamination agents; the LWHS will provide this capability that will support the deactivation of the 327 Facility by the end of FY 2007.

SIGNIFICANT CHANGES FROM FY2001-2002

The project is currently scheduled to commence in FY 2001. However, due to funding constraints this activity has been deferred to FY 2002. There is a significant increase in funding from FY 2001 to FY 2002.

DOE Priority: 217 **PBS #:** RL-TP11 **Unit of Analysis:** 003

UAS Title: 309/PRTR Deactivation

Benefits Summary

FY 2002 work scope contains activities required to complete deactivation of the 309 Building/PRTR work in FY 2004. These activities are necessary to place the contaminated facilities in a passively safe and environmentally secure configuration and to preserve that configuration for a minimum of 10 years. This includes the deactivation of all active systems, decontamination, and waste removal to allow for minimum surveillance during that period of time. This represents the project end state for the deactivation of the 309 Building.

SIGNIFICANT CHANGES FROM FY 2001-2002:

The increase from FY 2001 to FY 2002 is a result of this UAS being funded below requirements in FY 2001, due to higher priorities in other parts of the Hanford site.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decree drivers associated with this activity at this time.

DOE Priority: 218 **PBS #:** RL-ER10 **Unit of Analysis:** 1VS

UAS Title: ER PROGRAM MANAGEMENT & SUPPORT - INCREMENT

Benefits Summary

This UOA is an incremental adjustment to UOA ER-10(OOS).
These functional organization activities are required to support the performance of the individual projects. Functional organizations provide the oversight and integration for quality, safety, engineering, science, management systems, and regulatory support. The assignment of individuals from these functions to support performance of a project is part of the project direct cost and not included. The BHI PM&S activities have been proportionally divided into the three primary Risk Areas: Min Safe, Remedial Actions, and D&D. The UOA assessment and evaluation reflect the primary activities for Min Safe.

The major areas of the Program Management & Support (PM&S) Subproject are:

Project Technical Support (TS):
Technical support which includes Design Engineering, Environmental Technology, Technology Applications, and Field Support maintains the ERC sampling and analysis infrastructure, maintains and operates electronic management systems for Hanford Site environmental data, provides environmental science and regulatory technical support. They provide engineering technical support and guidance for design, Systems Engineering and Nuclear Safety, and coordinate site-wide technical services/activities. They also support the development and demonstrations of new technologies.

Program and Project Support :
Program and Project support includes public involvement and community relations, project procurement, and records and document control.

External Affairs is a centralized function which supports all Environmental Restoration projects and functional organizations with public involvement, employee communication, media relations and governmental affairs services.
External Affairs also provides emergency response support to the Hanford Site. It is considered an essential service for FY2001 and FY2002.

Project Procurement and Property Management provide support to the Project Teams and Functional Departments performing the Environmental Restoration of the Hanford Site by procuring materials, services and subcontracts, and by managing property and equipment resources, in full compliance with the Environmental Restoration Contract. This function is considered an essential service for FY 2001 and FY 2002.

Records and Document Control is a centralized services function which supports all projects and functional organizations. It is considered an essential service for FY2002.

Planning and Controls:
Planning and Controls includes project baseline maintenance, project services, project support, ERC performance measurement, and administration of DOE-Richland Operations Office (RL) work requests.

Quality Environmental Safety & Health (QES&H):
Compliance, Quality, Safety & Health professionals provide technical support to the ERC in the disciplines of integrated safety management, industrial safety, radiation safety, occupational health, chemical safety management, fire protection, industrial hygiene, lessons learned, emergency preparedness, accident investigation, occurrence notification reporting, safeguards and security, environmental compliance, quality services and independent assessments.

Incremental By Year:

FY2002: Essential services to support the performance of the projects: Safety, Quality Assurance, Regulatory Compliance, Data Management, Engineering Planning, Project Controls and Public Affairs support for the Environmental Restoration Project. These activities should be considered essential services.

Regulatory Drivers

External Affairs provides the services for TPA milestones which require formal public involvement processes. These milestone numbers and description are submitted by each project.

Project Procurement and Property Management are required and necessary to effectively and efficiently support the Environmental Restoration Program, regulatory environmental compliance, and compliance with the following:
Bechtel Hanford, Inc. (BHI) Contract No. DE-AC06-93RL12367
o PART I: SECTION C Description/Specification/Work Statement
o PART I: SECTION H-17 Government-Owned Property and Equipment
o PART II: SECTION I-26 FAR 52.237-2 Protection of Government Buildings, Equipment, and Vegetation (Apr 1984)
o PART II: SECTION I-31 FAR 52.251-2 Interagency Fleet Management System Vehicles and Related Services (Jan 1991)
o PART II: SECTION I-34 Procurement of Construction (Jun 1991)
o PART II: SECTION I-35 Procurement of Architect-Engineering Services
GENERAL CLAUSES:
o FAR 52.203-9 Requirement for Certificate of Procurement Integrity-Modification (Nov 1990)
o FAR 52.219-8 Utilization of Small Business Concerns and Small Disadvantaged Business Concerns (Feb 1990)
o FAR 52.219-9 Small Business and Small Disadvantaged Business Subcontracting Plan (Jan 1991)
o FAR 52.219-13 Utilization of Women-Owned Small Businesses (Aug 1986)
o FAR 52.219-16 Liquidated Damages-Small Business Subcontracting Plan (Aug 1989)
o PART III: SECTION J - ATTACHMENT 6 Subcontracting Plan
o DOE ORDER 1332.1A C-1 Uniform Reporting System
o DOE ORDER 4300.1C C-A Real Property Management
o DOE ORDER 4320.1B C-1 Site Development Planning
o EXECUTIVE ORDER 13101 Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition

Records and Document Control is required to support budgeted clean-up work and comply with the following :
o DOE Order 1324.5B" Records Management Program" which references the following laws and regulations:
- 44USC Chapters 21,29,31 and 36
- 36CFR Chapter XII,
- 41CFR Chapter 201
o TriParty Agreement Article XXXVI - "Retention of Records" which references
- CERCLA Sec. 113(k) requirements

Planning and Controls:
The Program Management and Support Planning and Control's functions support the budgeting and forecasting process by establishing controls and providing documentation to assure project DOE contractual performance requirements are met. The budgeting process consists of detailed planning supporting Detailed Work Plans, which are utilized for execution year monitoring, as well as outyear budget submittal support, estimate preparation, trending variances to the Detailed Work Plan, forecasting at completion costs, and providing an early- warning as to potential cost/schedule variances. Planning and Controls provides a forum for DOE and Bechtel Management to provide corrective action to ERC project variances and mitigate cost/schedule overruns. Without adequate funding, the quality of the budgeting, monitoring, forecasting and reporting process would be detrimentally impacted.

The ERC baseline planning and monitoring are essential to the credibility of the DOE mission to respond to the regulators and stakeholders for meeting strategic initiatives and DOE negotiated requirements for Tri-Party Agreement Milestones. Without funding, preparation and update of the ER Long Range Plan and supporting MYWP documents, timely verification of the success, or lack of success of the ERC program would be jeopardized.

Reduced funding of the Program Management and Support Planning and Controls functions will result in ERC restructuring of the organization with either (1) DOE-RL assuming increased responsibility for activities or (2) significantly reduced PM&S planning and subsequent impacts to Project efficiencies.

Quality Environmental Safety & Health (QS&H):
The technical support provided by QS&H and CQP personnel is required to support: maintaining quality, safety and health programs to achieve regulatory compliance; validation of the Integrated Environmental, Safety and Health Management System (ISMS); revisions of the Chemical Management System (CMS) Requirements Document; reactivation of excess chemical program; offsite visits from EPA/DNFSB; developing and revising the Radiation Protection Plan; conducting Environmental, Safety, Health and Quality assessments and surveillance's of ERC activities; performing vendor/lab audits/surveys; coordinating and supervising the ERC-wide program for the Price Anderson Amendment Act (PAAA), including identification, tracking, trending, corrective actions, and reporting

Anderson Amendment Act (PAAA), including identification, tracking, trending, corrective actions, and reporting PAAA violations; conducting interpretive authority activities for 10CFR830.120 PAAA potential noncompliance; issuance of occurrence notification reports; performing Root Cause analysis for accidents, occurrences, and PAAA non-compliance; developing, maintaining, and overseeing implementation of the Quality Assurance Program to verify compliance with regulatory and contractual requirements; reviewing ERC procedures, plans, and procurement documents for conformance to Quality Program requirements; maintaining and supervising the safeguards and security, industrial hygiene, fire protection, lessons learned, industrial safety and occupational health programs; coordinating the review and update of BHI MA-02, Project Procedures, Section 2.0 Quality, Safety & Health (QSH) and designated procedures in BHI-MA-01, Policies, Organization, and Responsibilities Manual; revising and updating BHI-QA-01, Quality Program Manual; and administer/coordinate the Corrective Action Tracking/Trending program.

Regulatory Compliance: The PM&S activities are required to support compliance activities and directly fund the planning and reporting required by the TPA and DOE orders.

Programmatic Driver (Peer Rvw Category): Multiple

DOE Priority: 220 **PBS #:** RL-ER06 **Unit of Analysis:** 20G

UAS Title: Historic Building Mitigation Project Increment

Benefits Summary

This Unit of Analysis is an incremental adjustment to ER-O6 (OM7).
The U.S. Department of Energy, Richland Operations Office (RL) initiated a new strategy that moved from project-by-project, building-by-building considerations to the development of a Historic Building Programmatic Agreement (PA). This PA provides a streamlined framework that governs the management of all Manhattan Project and Cold War Era properties on the Hanford Site; and guarantees that historic preservation requirements are expedited while ensuring that cleanup activities are not delayed. The Historic District Treatment Plan, required under Stipulation IV of the PA, directs the development of a comprehensive report, which will chronicle the uniqueness of the Hanford Site, its technology, and the people who worked here. The report is scheduled for draft completion on September 29, 2000. The objective is to mitigate property types rather than individual properties. This will be accomplished by writing a historic narrative for each property type and/or process that calls out changes, modification, adaptations, or adjustments in the property type or process over time. Selected buildings will then be factored into this narrative as they support, typify, or exemplify aspects of that history. An information guide will be provided that directs researchers to existing documentation, as well as data generated in support of the mitigation. Finally, the report will contain recommendations for future uses of properties selected in consultation with the public.

WHAT ARE WE BUYING:
To date through FY02:

Final Drafts of the "Recommendations for Future Uses" and "Radiological Health and Safety" of Chapter 4 of the Hanford Site Manhattan Project and Cold War Era Historic District Final Treatment Report were issued. A final Draft of the Historic American Engineering Record documentation for the 105 C Reactor was delivered for review.

Chapter 1, "Historic Overview" of the Final Treatment Report will be written. This database will be finalized and the chapter completed from all materials gathered to-date. Draft chapters and site forms from FY99 will be distributed for comment. Historic artifact assessment walkthroughs will be conducted.

The draft Hanford Site Manhattan Project and Cold War Era Historic District Final Treatment Report will be complete, and the report will be finalized.

Incremental By Year:

FY2002: Submit final report.

Impact adjusted: The Hanford Site Manhattan Project and Cold War Era Historic District Final Treatment Report will be finalized following receipt and incorporation of public comments received during the public comment period.

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS: N/A

This work is governed by agreements with Regulatory Agencies.

Regulatory Compliance: The activities are required by the TPA and DOE orders.
After completion of the cleanup activities the area would be in compliance.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 222 **PBS #:** RL-ER01 **Unit of Analysis:** 1WY

UAS Title: 100 KR Source Remedial Action Increment

Benefits Summary

This Unit of Analysis is an incremental adjustment to UOA ER-01 (12Z).
The 100-KR Area is one of six reactor areas located in the 100 Area along the Columbia River. The 100-KR Area includes two surface source operable units (OU), 100-KR-1 and 100-KR-2. These OUs contain individual waste sites and the 105-KW and 105-KE Reactor buildings. The two sources OUs received several types of liquid effluent, decontamination waste streams and miscellaneous liquid and solid wastes.

The reactor area source OUs have been assessed and are being remediated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Interim Records-of-Decision (RODs) were issued to expedite the cleanup process. Sites near the Columbia River are being remediated first, to be followed by sites near the reactor buildings.

Remediation of waste sites in 100-KR-1 and 100-KR-2 involves excavation, disposal of wastes in the Environmental Restoration Disposal Facility, backfilling and site closeout. Remaining assessment activities are being addressed on an area-wide basis in the 100-HR source remedial action UOA. Remedial design for solid waste sites part of the 100-KR source remedial action UOA and will be completed in FY2002.

To date through FY02:

. Complete solid waste site design. Complete removal of 39K tons of contaminated waste through FY2002.
. These activities are required to support enforceable TPA milestone M-16-10A: Initiate remedial action at 100-KR-land TPA M-16-00A: Complete all 100 area remedial actions

Incremental By Year:

FY 2002: Initiate remediation of liquid waste sites.

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

These activities are required to support enforceable TPA milestone M-16-10A: Initiate remedial action at 100-KR-land TPA M-16-00A: Complete all 100 area remedial actions.

Regulatory Compliance: If not completed DOE will not be in compliance with the TPA and may be subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 223 **PBS #:** RL-ER02 **Unit of Analysis:** 1ZW

UAS Title: 200 NPL Common Assessment/Remedial Action Increment

Benefits Summary

This Unit of Analysis is an incremental adjustment to UOA ER-02 (OWL).
Funding of this UAS is necessary to complete the environmental restoration (ER) remedial action (RA) work scope consistent with the 200 Areas RI/FS Implementation Plan (DOE-RL-98-28), Rev. 0, and complete the Hanford prototype barrier monitoring and meet TPA commitments.

The 200 Areas Source Remedial Action (RA) consists of 22 Source Operable Units (OU) located on the central plateau of the Hanford reservation. The 200 Areas can be broken down into 200 East, 200 West and 200 North. The 200 Areas Source OU contains approximately 450 waste sites and 210 unplanned releases (UPR) that require assessment activities. These waste sites and UPRs were associated with the spent fuel processing activities that occurred in the 200 Areas. Remediation of waste sites by engineered barriers form the basis for current cost baseline estimating, although some removal actions may be required. Barrier monitoring activities are currently taking place for the existing demonstration barrier in the 200-BP-1 OU.

The soil contamination from the liquid and solid wastes contain low-level through Tru-level radiological, low-level mixed wastes, and chemical constituents and will result in barriers covering approximately 5.7 million square meters. Groundwater (GW) contamination exists at various 200 Area Groundwater OUs and is addressed in a separate PBS (200 GW).

The planned remedial actions are designed to reduce the risk to the public workers and the environment by constructing engineered barriers to isolate the contamination in the 200 waste sites from the environment. These actions will be taken in accordance with a Record of Decision and support a land use of continued waste management activities in the 200 Area. The scope of the related deviation standard covers the management, planning, design field work, remedial action, and final documentation of the RA for the sites in this unit of analysis.

The previous 32 OU's have recently been recombined into 23 OU's as a result of streamlining activities in the 200 Areas that are nearing completion. Changes (Change Numbers M-13-97-01 and M-20-97-01) have been approved that incorporate the new 23 operable units into the TPA. A 200 Area RI/FS Implementation Plan which outlines a streamlined assessment and cleanup approach for the 23 operable units has also been finalized. This approach, including the revised operable units have not been incorporated into baseline (post FY 2001) at this time awaiting completion of the 200 Area RI/FS Implementation Plan.

WHAT ARE WE BUYING:

To date through FY02:

Continue 200 Area Assessment activities based on the current Detailed Work Plan, which incorporates the 23 new operable units (see below).

Incremental By Year:

FY2002: 200-CW-1: Complete a proposed plan with proposed RCRA Permit modification. Complete confirmatory sampling plan. Initiate the RI/FS work plan.
200-CS-1: Complete the RI report and initiate the FS report with RCRA TSD closure plan
200-CW-5: Complete field characterization and RI report. Initiate a FS Report.
200-PW-2: Complete field characterization activities.
200-PW-4: Complete the RI/FS work plan with TSD unit sampling plan. Complete field characterization activities. Initiate a RI report.
200-TW-1: Complete RI Report.
200-TW-2: Complete RI Report.
200-PW-1: Complete the RI/FS work plan.
200-CW-2: Complete the RI/FS work plan.
200-LW-1: Complete the RI/FS work plan.
200-MW-1: Initiate the RI/FS work plan.
200-PW-3: Initiate the RI/FS work plan.
200 Common: General support for 200 Area-wide activities including Groundwater/Vadose Zone integration.

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

These activities are required to support the following TPA enforceable milestones.

- M-13-19: Submit 200 North Pond Cooling Water Group RI/FS Work Plan;

- M-13-20: Submit Gable Mountain/B Pond and Ditch Cooling Water Group RI/FS Work Plan;

- M-13-21: Submit 200 Chemical Sewer Group RI/FS Work Plan;

- M-13-22: Submit U Pond/Z-Ditches Cooling Water Group RI/FS Work Plan;

- M-20-00: Submit Closure Plant/Post Closure Plans for all RCRA TSD Units 2/28/04;

- M-15-00: Complete the RI/FS process for all OU's 12/31/08;

- M-16-00: Complete remedial actions for all non-Tank Farm OU's 9/30/18;

- M-20-33: Submit Closure/Post Closure Plan for 216-A-10 Crib &. A-36B Crib;

- M-20-39: Submit Closure/Post Closure Plan for 216-S-10 Pond and Ditch;

- M-20-52: Submit Closure/Post Closure Plan for 216-A-37-1 Crib;

- M-20-53: Submit Closure/Post Closure Plan for 207-A Retention Basin;

- M-20-54: Submit Closure/Post Closure Plan for 241-CX Tank System;

Regulatory Compliance: The U.S. Department of Energy, Richland Operations Office will not be in compliance with the Tri-Party Agreement and/or the Recourse Conservation and Recovery Act of 1976 and subject to immediate fines and penalties.

Programmatic Driver (Peer Rvw Category): 1

DOE Priority: 225 **PBS #:** RL-WM04 **Unit of Analysis:** 080

UAS Title: M-91 Transuranic Waste [TRU] Compliance Activities

Benefits Summary

This unit of analysis (UAS) provides funding for TPA milestone M-91 compliance activities related to transuranic waste. These activities include Phase 1 transuranic waste retrieval efforts, Phase 2 transuranic waste retrieval efforts, remote-handled transuranic caisson retrieval, and treatment of, remote-handled and large box transuranic waste items. During FY2002, the Phase 1 transuranic waste retrieval efforts are funded, and the design of the facility or facilities for remote handled and large size transuranic and transuranic mixed waste is under way. Other activities do not begin until later years.

Regulatory Drivers

Associated TPA driver is M-91 which requires retrieval of transuranic waste. The facility built for managing RH- and large box TRU is necessary for the completion of M-91-05-T01, M-91-06-T01, and M-91-08-T01. These target milestones are expected to be converted to interim milestones upon completion of the TRU Project Management Plan in FY 2000. The waste retrieved under this UAS will apply toward completion of M-91-07. There are no other consent orders or DNFSB drivers associated with this UAS at this time.

DOE Priority: 226 **PBS #:** RL-WM04 **Unit of Analysis:** 0C9

UAS Title: Radioactive Mixed Waste Treatment

Benefits Summary

This unit of analysis provides funding for additional levels of radioactive mixed waste (RMW) treatment to achieve maximum cost effectiveness. After minimum TPA M-19 compliance is achieved under the essential services unit of analysis (UAS # 086), significant cost savings can be achieved through treating additional volumes at lower contractual rates. Waste treatment contracts are performed both on-site and off-site. Treatment provided includes thermal treatment at reduced contract rates, non-debris mixed waste treatment (stabilization), and direct disposal of land disposal restrictions (LDR)-compliant waste. Funding is also provided to perform characterization of wastes prior to treatment.

Regulatory Drivers

Associated TPA driver is milestone M-19 which requires treatment of mixed waste. Also associated is milestone M-26 which drives the development of an annual Land Disposal Restrictions (LDR) report, with associated plans and schedules for treatment of mixed waste. There are no other consent orders or DNFSB drivers associated with this UAS at this time.

DOE Priority: 227 **PBS #:** RL-TP02 **Unit of Analysis:** 020

UAS Title: WESF Upgrades

Benefits Summary

This UAS provides minimal technolgoical development necessary for the long-term surveillance and management of the cesium and strontium capsules, which constitute 30% of the radioactive inventory on the Hanford Site. The work scope also includes upgrades to the facility safety systems which have exceeded their design life, and will be needed until the capsules are removed and WESF is shut down in 2017.

Regulatory Drivers

The TPA milestone M-92-01 requires completion of the capsule integrity system upgrade that is included in this UAS. There are no DNFSB or Consent Decree drivers for the projects.

DOE Priority: 229 **PBS #:** RL-WM04 **Unit of Analysis:** 0BB

UAS Title: Solid Waste Treatment Essential Services (Increment)

Benefits Summary

This unit of analysis (UAS) provides funding to make replacement of major waste processing equipment and computer interface equipment at the Waste Receiving and Processing (WRAP) facility to prevent an interruption to WRAP operations.

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree directly associated to this UAS.

DOE Priority: 230 **PBS #:** RL-WM03 **Unit of Analysis:** 0GV

UAS Title: Solid Waste Storage / Disposal Essential Services (Increment)

Benefits Summary

This UAS provides for contamination control activities in the Low Level Burial Grounds (LLBG) to reduce or resolve subsidence issues, contamination spread and environmental damage. The contamination spread is primarily related to deep rooted vegetation growth that brings contamination to the surface. This contamination control activity would initiate a long term solution and eliminate some ongoing small contamination cleanup activities.

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree directly associated to this UAS.

DOE Priority: 231 **PBS #:** RL-WM05 **Unit of Analysis:** 0WZ

UAS Title: 200 Area Liquid Effluent Facilities (LEF) Essential Services

Benefits Summary

This unit of analysis provides for updating the SAR for the 242-A Evaporator to meet DOE Order 5480.23 requirements, and support services for operation of the 200 Area LWPF in FY 2002. The support services include implementation of site wide safety and health initiatives, increased HP Analyst support for RadCon, increased contractor support for Regulatory Compliance, and enlarging the area of the protective coating for the 291 Load-In Facility.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers directly associated with this essential services activity.

DOE Priority: 233 **PBS #:** RL-OT01 **Unit of Analysis:** 0VT

UAS Title: HANFORD ENVIRONMENTAL MONITORING - Increment

Benefits Summary

Funding this UAS provides the following FY 2002 activities:

-- Hanford Environmental Dose Overview: essential support to RL in providing oversight for the Hanford Environmental Dose Overview Panel which attempts to ensure consistency in dose calculation methodology and interpretation at the Hanford Site. In addition, this activity has been identified as a critical function in a successful Groundwater/Vadose Zone Integration Project.
-- Monitoring of nearby food products, collection of necessary data to assess ecological risks within the Columbia River, and assessment of Hanford Reach contaminant influx.
-- Support to RL on the development of a sitewide Environmental Radiation Protection Plan in anticipation of the promulgation of 10 CFR 834.

SIGNIFICANT CHANGES FROM FY 2001-2002:
Although this UAS is unfunded in FY 2001, there is no significant change in scope for FY 2002.

CONNECTIVITY FROM UAS TO PBS END POINTS:
This workscope augments support for the safe achievement of the end states at Hanford. This UAS provides an additional set of essential safety activities that support safe and compliant operations at Hanford, helping to protect the health and safety of workers and the public, and to preserve the environment.

DESCRIPTION:
This Unit of Analysis (UAS) covers environmental monitoring activities of the Surface Environmental Surveillance Project (SESP) not included in the HANFORD ENVIRONMENTAL SURVEILLANCE - BASE OPERATIONS UAS. [SESP is a multi-media environmental monitoring program conducted to measure the concentration of radio nuclides and chemical contaminants in the environment (far field) and assess the integrated effects of Hanford derived contaminants on the environment and public. The monitoring program includes sampling air, surface water, sediments, soil, natural vegetation, agricultural products, fish, and wildlife on and off site. In addition, the program measures ambient external radiation levels in the environment. This program coordinates it s efforts closely with the Near Field Monitoring program included in the Effluent Emission Monitoring (EEM) Min Safe UAS.]

The Dosimetry Coordination Task provides essential support to RL in providing oversight for the Hanford Environmental Dose Overview Panel which attempts to ensure consistency in dose calculation methodology and interpretation at the Hanford Site. The Hanford Environmental Dosimetry Guidance document will be updated as needed, and new regulatory requirements and recommendations relative to environmental dosimetry will be tracked. In addition, dosimetry computer code support and maintenance will be provided.

Also included in this UAS is support to DOE-RL on the development of a sitewide Environmental Radiation Protection Plan. This is included in anticipation of the promulgation of 10 CFR 834.

The MIN SAFE HANFORD ENVIRONMENTAL SURVEILLANCE UAS monitoring activities are restricted to those required for minimum safe operations. For FY 2002, additional monitoring is required to fully meet the intent of the DOE orders on Environmental Monitoring and to assure the public that the environment on and around the Hanford Site do not pose a health threat as a result of Hanford related activities. Included are Columbia River monitoring, additional monitoring of nearby crops to measure the amount of Hanford related contamination moving offsite, and measurement of Hanford Reach Contaminant Influx. These additional studies will support a more detailed evaluation of contaminant distribution in the Columbia River should that evaluation be required.

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

There are no TPA, DNFSB, or Consent Decree drivers associated with this activity at this time.

This UAS is used to achieve or maintain regulatory compliance with the following:
* Reg Driver Category 3 - Required by Federal environmental statute or regulation (including permits): 10 CFR 834
NOTE: 10 CFR 834 has been under development for some time and is expected to be promulgated by FY 2002. This regulation requires development of an Environmental Radiation Protection Plan. Funding for developing the sitewide portion of this plan for Hanford is represented by the UAS.

DOE Priority: 234 **PBS #:** RL-OT01 **Unit of Analysis:** 0UR

UAS Title: RIVER CORE TECHNICAL ELEMENTS: GW/VZ INTEGRATION

Benefits Summary

Funding this UAS provides the following critical activities in FY 2002 to enhance activities conducted under UAS ID O2Q that are critical to the success of the Environmental Restoration Program's Groundwater/Vadose Zone Integration Project:
-- Provide a thorough understanding of the Columbia River environment, including all the physical, chemical, and biological processes that are intricately linked throughout the system. In addition, provide the structure through which the river technical element activities of the GW/VZ Integration Project will be conducted.
-- Define the hydrologic setting, current contaminant levels, species abundance and diversity, sensitive habitats, and critical locations in the Columbia River environment, including the groundwater/river interface. In addition, define and verify input parameters for, and provide data for the verification/validation of fate and transport models to be used in the river assessment.
-- Fill key data needs relative to physical, chemical, and biological processes influencing contaminants flowing from the groundwater into the Columbia River. In addition, develop capability to estimate the flux of Hanford contaminants into the Columbia River.
-- Develop credible model to describe and predict biological contaminant migration and fate in the river environment
-- Develop credible models (hydrodynamic, sediment, and contaminant) to describe and predict contaminant migration and fate in the river environment.

SIGNIFICANT CHANGES FROM FY 2001-2002:
Although this UAS is unfunded in FY 2001, there is no significant change in scope for FY 2002.

CONNECTIVITY FROM UAS TO PBS END POINTS:
This workscope will help determine future potential impacts of Hanford contaminants on the Columbia River to support appropriate clean-up alternatives for achieving the end state established for the river.

DESCRIPTION:
Additional characterization of the river environment is described under this unit of analysis. Characterization is required to completely evaluate future potential impacts of Hanford contaminants on the Columbia River. Appropriate characterization activities will include the Columbia River environment from upstream of Hanford (establishing a background, or reference segment) to a point downstream of Hanford as determined appropriate by the assessment process. The Columbia River environment to be considered in the river module includes the riparian zone and associated biota along the river, the near-river groundwater (bank storage), the hyporheic zone, the river water column, the river bottom and associated sediments, aquatic biota, and users of the river environment. In addition to providing a thorough understanding of the river conditions, results of the characterization effort will provide the information to define parameters for and verify/validate various fate and transport models. This activity will also provide extensive information necessary to identify and provide direction for development and application of the necessary S&T. Specific products generated through the characterization of the river environment include:
7 Contaminant concentrations in all media of concern - resolve current issues and support conceptual model development
7 Hydrological setting description
7 Species abundance and distribution data and maps
7 Sensitive habitat and critical location maps
7 Fate and transport model parameterization
7 Long term Columbia River surveillance

The scope of technical work associated with the entry of contaminated groundwater from the Hanford Site into the Columbia River covers the characteristics, dynamics, and temporal changes in contamination. Characteristics include composition, concentration, mobility, toxicity, and attenuation processes. Locations and plume boundaries are also characteristics. Dynamics involves the direction, rates, and preferential pathways associated with discharge from the aquifer into the free stream of the river. Temporal changes involve natural attenuation processes, such as dispersal, decay, chemical transformation, and biological processes, and also changes induced by remediation activities and changes in the natural system (e.g., near-river excavations; increased river levels).

Specifically, areas that would be addressed include:
7 Expanded sampling and analysis program of Hanford shoreline sites along the Hanford Reach
7 In situ data logging program, focused on water level and basic water quality parameters along the shoreline to determine relationship between fluctuating river water levels on contaminant characteristics and discharge
7 Evaluation and interpretation of existing data relative to shoreline monitoring/characterization to determine

7 Evaluation and interpretation of existing data relative to shoreline monitoring/characterization to determine configuration and relationship between GW and Columbia River
7 Development of numerical simulation to provide predictive capability of contaminant entry into the river.

Biota constitute both an endpoint for determining cleanup standards and impacts as well as a transport medium for groundwater-derived contaminants in the Columbia River system. Many of the contaminants in the Hanford inventory are also biological nutrients or their chemical analogs. Transport parameters for these components within the biota are highly uncertain (up to 4 orders of magnitude) due to poor understanding of underlying nonlinear processes. Items to be addressed in the biological transport model include:
7 Bioavailability
7 Bioconcentration
7 Biomagnification
7 Biotic transport

This activity will determine appropriate transport parameters for a limited set of Hanford contaminants. This activity is necessarily multi-year due to the length of time needed to bring the system to equilibrium through the food chain. It should be noted that this activity, if combined with the needed toxicological investigations, would result in significant costs savings.

Hydrodynamic advection and dispersion can be simulated using 1D, 2D, and 3D models. Key information needs will be refined river bathymetry and calibration/verification data. An existing 1D model is currently available for the Hanford Reach. This model simulates cross-sectional averaged quantities thus will not be useful for investigating contaminant mixing in the river. It is useful as a means to provide time-varying water surface elevation boundary conditions at the river that can be used in the VZ/GW models. A 2D model exists for the area of the Columbia River from Kennewick to Portland. This model could be extended upstream to Priest Rapids Dam and would enable simulations of lateral distributions of velocities, sediments, and contaminants. Note that a 2D model averages quantities over the depth of the water column. In limited areas of great concern a 3D model can be applied. Items include:
7 Bathymetry Data
7 Calibration/Verification Data
7 2D/3D Model application

Transport and fate of contaminants that sorb to sediments will require the application of sediment transport models that will be coupled to the hydrodynamic and contaminant transport models. Key needs in this area are the existing sediment size distribution in the channel bottom and influx of sediments from tributaries to the Columbia River. Also needed is the porosity of the channel bed and amount of sediment available for transport. Calibration and verification data inlcude measurements of suspended sediment load, bed load, and deposition rates in McNary reservoir. Grain-size specific transport parameters such as critical shear stress for erosion and deposition will also need to be measured. Items include:
7 Sediment Size Distribution
7 Transport Parameters
7 Calibration/Verification Data

Transport and fate of dissolved, sediment-sorbed, and bioaccumulated contaminants will need information to define influx rates, existing channel bed inventory, sorption, transformation, and bioaccumation. Key information that is needed will be the grain-size specific sorption parameters (Kd), speciation, and rates of bioaccumulation. These will be needed to apply and parameterize a 2D and/or a 3D numerical model. Items include:
7 Influx rates
7 Existing channel bed inventory
7 Chemical Reactions
7 Bioaccumulation
7 Calibration/Verification data

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

There are no TPA, DNFSB, or Consent Decree drivers associated with this activity at this time. This UAS would support completion of anticipated regulations and completion of associated TPA milestone(s).

DOE Priority: 235 **PBS #:** RL-OT01 **Unit of Analysis:** 178

UAS Title: CULTURAL RESOURCES: ARTIFACT RECOVERY/CURATION & LOCKE ISLAND MITIGATION

Benefits Summary

This UAS will:
-- recover artifacts from Locke Island to comply with
the National Historic Preservation Act, Native American Graves Protection and Repatriation Act, Archeological Resources Protection Act, and American Indian Religious Freedom Act. These cultural resources on Locke Island will otherwise be lost from the impending erosion due to high Columbia River water.
-- design and construct a Curation Storage Facility to properly house Hanford artifacts under a controlled environment.
-- mitigate the archaeological site under the Vernita Boat Launch.

SIGNIFICANT CHANGES FROM FY 2001-2002:
Although this UAS is unfunded in FY 2001, there is no significant change in scope for FY 2002.

CONNECTIVITY FROM UAS TO PBS END POINTS:
This workscope supports achieving the end states established for Hanford in a compliant manner that protects cultural and Native American resources.

DESCRIPTION:
Activities in FY 2002 include the following:

- Monitoring Discrete Subtask: Hydrology Model Development
- Discrete Subcontract: Aerial Fly-over of Locke Island to obtain required data
- Discrete Subcontract: Analysis of T800 Floor (collection of artifacts)
- Locke Island Emergency Activities -- Contingency Plan (because the island will be lost to high water, excavation and recovery of artifacts is required)
- Curation Storage Facility including storage design, fabrication/upgrade, transport objects from facilities, and Curation/Storage Facility maintenance
- Procuring a Field Response Trailer (field laboratory needed for archaeological mitigation efforts)
- Vernita Boat Launch mitigation -- There is an archaeological site underneath current launch area scheduled for remodelling

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS:

There are no TPA, DNFSB, or Consent Decree drivers associated with this activity at this time.

RL FY2002 BUDGET FORMULATION

DOE Priority: 236 **PBS #:** RL-TP13 **Unit of Analysis:** 2TW

UAS Title: L-297, Equipment Disposition Project - Incremental

Benefits Summary

This UA provides disposition of legacy, radiologically contaminated heavy mobile and rail equipment on a priority basis. Approximately 60 pieces of contaminated, legacy equipment were identified for disposition since the inception of the Equipment Disposition Project (L-297) in FY 1995. Of these, approximately 25 to 30 pieces of equipment will require disposition between FY 2002 and beyond (originally planned to complete in FY 2006, but prior year funding levels has delayed completion for up to 5 to 10 years).
SIGNIFICANT CHANGES FROM FY 2001- 2002:
This is a new UA in FY 2002 and was this workscope was funded under UA 2NU in FY 2001 and prior years. The increase from FY 2001 to 2002 is due to the disposition of this equipment being deferred from prior years resulting in the need for increased funding. The effort to complete the disposition of this equipment is required to meet regulators expectations.
CONNECTIVITY FROM UAS TO PBS END POINTS:
This UA contributes to the accomplishment of the PBS end point by providing timely disposition of contaminated legacy equipment.

Regulatory Drivers

There are no TPA, DFNSB or consent decree drivers associated with this activity at this time. However, this activity is essential to support the completion of numerous TPA, DNFSB, and consent decree drives related to the handling and transport of waste on the Hanford Site.

DOE Priority: 237 **PBS #:** RL-WM06 **Unit of Analysis:** 07S

UAS Title: 222-S Laboratory FSAR

Benefits Summary

This unit of analysis provides for the preparation of the Facility Safety Analysis Report (FSAR) for the 222-S Laboratory, which will bring the 222-S Laboratory into compliance with DOE Order 5480.23. Current 222-S operations use the existing Interim Safety Basis (ISB) document, which is updated annually as part of the Analytical Services Essential Safety UAS 07R.

Significant Changes from FY 2001 - FY 2002:
Preparation of the Facility Safety Analysis Report was not funded in FY 2000 and FY 2001.

Connectivity from UAS to PBS endpoints:
This UAS contributes to the accomplishment of the PBS endpoint by supporting essential safety operations at the 222-S Laboratory, which supports other Hanford Projects' endpoints.

Regulatory Drivers

There are no TPA, DNFSB, or consent decree requirements fulfilled by this UAS. This UAS does indirectly provide support to other Hanford UAS with TPA and DNFSB drivers.

Other Regulatory Drivers:
DOE Order 5480.23; DOE-RL-96-98, Hanford Analytical Services Quality Requirements Document; DOE-RL-96-92, Hanford Strategic Plan; DOE-WIPP-069, WIPP Waste Acceptance Criteria; ST 4502, State Waste Discharge Permit for the 200 Area TEDF.

DOE Priority: 238 **PBS #:** RL-WM03 **Unit of Analysis:** 2U4

UAS Title: SW DOE Order Support

Benefits Summary

This UAS provides for the implementation of DOE Order 435.1, Radioactive Waste Management for the Waste Managment and Analytical Services facilities.

Regulatory Drivers

There is no TPA, DNFSB, or Consent Decree drivers associated with this UAS at this time.

DOE Priority: 241 **PBS #:** RL-WM06 **Unit of Analysis:** 083

UAS Title: Analytical Services Essential Services

Benefits Summary

Essential services include funding for continued enhancements to the Laboratory Information Management System (LIMS/LABCORE). Essential services are targeted to reduce costs associated with maintaining and operating analytical laboratories; and to ensure the needed capacity of these systems are retained.

Significant changes from FY 2001 - FY 2002.
A significant portion of Analytical Services essential services was not funded in FY 2001. This scope is included in this UAS for FY 2002.

Connectivity from UAS to PBS endpoints:
This UAS contributes to the accomplishment of the PBS endpoint by providing continued enhancements to LIMS/LABCORE to support other Hanford Projects' endpoints.

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Regulatory Drivers

There are no TPA, DNFSB, or consent decree requirements fulfilled by this UAS. This UAS does indrectly provide support to other Hanford UAS with TPA and DNFSB drivers.

Other Regulatory Drivers:
DOE-RL-96-98, Hanford Analytical Services Quality Requirements Document; DOE-RL-96-92, Hanford Strategic Plan; DOE-WIPP-069, WIPP Waste Acceptance Criteria; ST 4502, State Waste Discharge Permit for the 200 Area TEDF.

RL FY2002 BUDGET FORMULATION

DOE Priority: 242 **PBS #:** RL-TP13 **Unit of Analysis:** 2TN

UAS Title: Transportation - Incremental

Benefits Summary

This UA provides incremental essential Transportation system equipment replacements that are not funded in the target case UA 0C5, "Transportation". In FY 2002 this activity includes replacement of (3) large cranes, a refrigeration equipment services truck, a fuel truck, (2) water trucks, (3) forklifts, and a road sweeper all of which are beyond their useful life, costly to maintain, and vital to the continuation of the Site mission. Replacement of essential pieces of heavy mobile equipment, vital in support of Hanford Site infrastructure, will assure reliability of this equipment for safe operations of the infrastructure in support of the Site cleanup mission. This equipment performs heavy lifting and transport tasks within all projects and programs at Hanford. This incremental UA also includes additional Road Refurbishment in support of the Transportation Infrastructure. Roads are deteriorating rapidly due to heavy hauling by the Environmental Restoration Project and inadequate funds in prior years to properly maintain the Site roads. This is especially important to support the increased traffic resulting from the Vitrification Plant Construction. Increased funding to refurbish the backlog of roads needing major maintenance will assure safe roadways for the transport of personnel, materials, and equipment throughout the Site.

SIGNIFICANT CHANGES FROM FY 2001-2002:

This is a new UA for FY 2002 that funds incremental Transportation requirements not funded in UA 0C5. Deferrals in previous years of funding for equipment replacements have resulted in the need for increased funding. Prior years budget reductions are causing a bow wave of Transportation needs, requiring immediate attention to support the Site mission in a timely and cost effective manner.

CONNECTIVITY FROM UAS TO PBS END POINTS:

This UA contributes to the accomplishment of the PBS end point by providing timely replacement of transportation equipment. Incremental replacement of heavy lifting equipment extends the life of the Transportation system in support of the Hanford Site mission. Assuring Transportation equipment are safe and compliant components of the Hanford Site Infrastructure, supports the overall goal of this PBS to provide a safe, environmentally compliant, and cost effective infrastructure to the end state of 2046.

Regulatory Drivers

There are no TPA, DFNSB or consent decree drivers associated with this activity at this time.

RL FY2002 BUDGET FORMULATION

DOE Priority: 243 **PBS #:** RL-TP13 **Unit of Analysis:** 2TS

UAS Title: Telecommunication Projects and Replacements - Incremental

Benefits Summary

This UA provides incremental essential Telecommunications projects and equipment replacements not funded in the target case UA 2Q0, "Replacement of Radio System on the Hanford Site". This incremental UA provides the following Telecommunication projects in FY 2002 to replace aging and vital systems to support the Hanford cleanup mission:

1. Project L-307, "End-of-Life Elimination of HLAN Base Band ", will replace the current obsolete, noncompatible Base Band system with the Site standard wiring that will allow the deployment of modern, high speed computers in vital mission facilities.
2. Project L-305, "Telecommunications UPS Redeployment", involves optimizing the use of existing Telecommunications Uninterruptable Power Supply (UPS) systems by evaluating current installations and equipment availability, then redeploying them where UPS systems use is vital to the Hanford Site Mission.

SIGNIFICANT CHANGES FROM FY 2001- 2002:

This is a new UA for FY 2002 that funds incremental essential Telecommunication projects and equipment replacements not funded in UA 2Q0. The increase from FY 2001 to 2002 is due to the backlog of Telecommunication projects and equipment replacements that are not being adequately funded in the target case.

CONNECTIVITY FROM UAS TO PBS END POINTS:

This UA contributes to the accomplishment of the PBS end point by providing timely, cost effective replacement and renovation of vital Infrastructure facilities and systems. The activities performed in this UA are required to assure the overall Site cleanup mission can be accomplished without major impact.

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 244 **PBS #:** RL-TP13 **Unit of Analysis:** 2TT

UAS Title: Electrical Utility Distribution Projects and Replacements - Incremental

Benefits Summary

This UA provides incremental essential Electrical Utility Distribution equipment replacements not funded in the target case UA 2R6, "Electrical Utility Distribution Projects and Replacements". In FY 2002 this incremental UA replaces an Electrical Utilities Manlift Truck. This unit will replace an identical unit, which has exceeded federal replacement standards. The new truck will be equipped with advanced safety technologies resulting in improved safety for line crews.

SIGNIFICANT CHANGES FROM FY 2001-2002:

This is a new UA for FY 2002 that funds incremental essential Electrical Utility equipment replacements not funded in UA 2R6. The increase from FY 2001 to 2002 is due to the backlog of Electrical Utility equipment replacements that are planned on a priority basis. Infrastructure needs and requirements are continuing to increase due to the aging infrastructure and prior year funding support has not keep pace with these needs.

CONNECTIVITY FROM UA TO PBS END POINTS:

This UA contributes to the accomplishment of the PBS end point by providing timely replacements to essential Electrical Utility Systems, thereby extending the life cycle of these systems in support of the Site mission. The overall goal of this PBS, supported by this UA, is to provide a safe, environmentally compliant, and cost effective infrastructure to support the Site cleanup mission through 2046.

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 245 **PBS #:** RL-TP13 **Unit of Analysis:** 2TR

UAS Title: Emergency Services/Preparedness Renovations - Incremental

Benefits Summary

This UA provides incremental essential Emergency Services/ Preparedness renovation projects that are not funded in the target case UAS 15C, "Emergency Services/Preparedness Renovations". In FY 2002 the renovation of the Law Enforcement and Security Training Center (LESTC), Project L-314, is planned. This project provides the LESTC facilities with a fire sprinkler system and additional restroom, training classrooms, and offices to meet the Sites Safeguards and Security training requirements. The Hanford Site will benefit from the renovation of the LESTC by providing adequate water supply lines, sanitary sewer service, Fire Protection Sprinkler System upgrades, and the addition of approximately 7,500 square feet to house new restrooms, shower facilities, training classrooms, and office space to meet current requirements.

SIGNIFICANT CHANGES FROM FY 2001- 2002:

This is a new UA for FY 2002 that funds incremental essential Site service renovation projects not funded in UAS 15C. The increase from FY 2001 to 2002 is due to the backlog of Emergency Services/Preparedness projects and equipment replacements that are not being adequately funded in the target case.

CONNECTIVITY FROM UAS TO PBS END POINT:

This UA contributes to the accomplishment of the PBS end point by providing timely, cost effective replacement and renovation of vital Infrastructure facilities and systems. The activities performed in this UA are required to assure the overall Site cleanup mission can be accomplished without major impact.

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 246 **PBS #:** RL-TP13 **Unit of Analysis:** 2TM

UAS Title: Facilities & Land Use - Incremental

Benefits Summary

The scope of this UA is to provide incremental essential major maintenance and equipment replacements for infrastructure general-purpose facilities (offices, sitewide support laboratories, shops, warehouses, etc.) and integration of land and facility uses at Hanford. In FY 2002 this UA:
1.) Provides incremental support to the site wide integration of land and facility uses based on the requirements established in the Hanford Comprehensive Land Use Plan Environmental Impact Statement (CLUP) approved in FY 2000
2.) Replaces 621-A and 621-B Emergency Generator buildings (Project L-321) to meet current requirements
3.) Replaces the 328 Building HVAC system to meet current requirements
4.) Replaces the roof for continued use of key infrastructure facilities (328 and 3790 buildings) that are beyond their useful life and need major maintenance
5.) Replaces essential capital equipment (i.e. floor scrubbers, specialized copying machines, etc.) for infrastructure general-purpose facilities that are beyond their useful life
6.) Remediates asbestos insulated steam lines that have been abandoned for more than five years and are becoming a safety hazard. This incremental workscope contains additional Facilities and Land Use requirements not provide in target case UA 02J, "Facilities & Land Use". This workscope includes the necessary planning, engineering, NEPA documentation, equipment procurement, and installation
Funding of this incremental workscope also supports the overall project mission to provide essential infrastructure services to the Site.
SIGNIFICANT CHANGES FROM FY 2001- 2002:
This is a new UA for FY 2002 that funds incremental Facilities and Land Use requirements not funded in UA 02J. The increase from FY 2001 to 2002 is due to the backlog of work for infrastructure facilities requirements that have not been funded in prior years. Infrastructure needs and requirements are continuing to increase due to the aging infrastructure and prior year funding support has not keep pace with these needs.
CONNECTIVITY FROM UA TO PBS END POINTS:
This UA contributes to the accomplishment of the PBS end point by providing repairs, renovations, or replacement of systems, in aging facilities, thereby extending the life cycle in support of the Hanford Site mission. The overall goal of this PBS is to provide a safe, environmentally compliant, and cost effective infrastructure to support the Site cleanup mission through 2046.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decrees associated with this activity at this time.

DOE Priority: 247 **PBS #:** RL-TP13 **Unit of Analysis:** 2TQ

UAS Title: Sanitary Sewer Projects and Replacements - Incremental

Benefits Summary

This UA provides incremental essential Sanitary Sewer Projects and equipment replacements that are not funded in the target case UA 2SD, "Sanitary Sewer Projects and Replacements". In FY 2002 Project L-315, "Replace Yakima Barricade Septic System" plans on replacing the existing holding tank (requiring routine pumping) at the Yakima Barricade with a permanent system meeting Washington State requirements.
SIGNIFICANT CHANGES FROM FY 2001- 2002:
This is a new UA for FY 2002 that funds incremental Sanitary Sewer systems replacement not funded in UA 2SD. The increase from FY 2001 to 2002 is due to needs and requirements continuing to increase due to the aging infrastructure. Also, prior year funding support has not kept pace with Site sanitary sewer system replacement needs.
CONNECTIVITY FROM UAS TO PBS END POINTS:
This UA contributes to the accomplishment of the PBS end point by providing safe, environmentally compliant, and cost effective infrastructure to support the Site cleanup mission through 2046

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 248 **PBS #:** RL-TP13 **Unit of Analysis:** 2TV

UAS Title: Disposition of 272E (Fab Shop) Facility (Remove Concrete) - Incremental

Benefits Summary

This UA provides incremental funding for the removal of the concrete foundation from the demolition of 272E Building and other vacant, high-risk facilities. The workscope to eliminate the significant hazards affecting the safety of Site workers and nearby occupied facilities is funded under Essential Safety UA 0X3, "Disposition of 272E & Other High Risk Facilities". Also, this activity restores the building sites to their natural condition and completes the cleanup of the surrounding area so occupied facilities and the environment are not impacted. The remaining foundations from the removed facilities are in a heavily congested area of 200 East Area and completing this work is essential to assure workers safety and provide adequate egress around nearby occupied facilities.
SIGNIFICANT CHANGES FROM FY 2001 - 2002:
This is new UA for FY 2002 that funds incremental cleanup for the disposition of 272E and other high-risk facilities not funded in UA 0X3. The increase from FY 2001 to 2002 is due to the first year this activity is funded for this demolition.
CONNECTIVITY FROM UAS TO PBS END POINT:
This UA contributes to the accomplishment of the PBS end point by providing a timely, cost effective disposition of legacy building sites and supports the overall cleanup of the site for re-utilization. The overall goal of this PBS is to provide a safe, environmentally compliant, and cost effective infrastructure to support the Site cleanup mission through 2046.

Regulatory Drivers

There is no TPA, DNFSB, or Consent Decree associated with this activity at this time.

DOE Priority: 249 **PBS #:** RL-ER05 **Unit of Analysis:** 212

UAS Title: 200 Area Canyon Disposition Initiative Increment

Benefits Summary

The Canyon Disposition Initiative will determine the final disposition of the five major chemical processing facilities (canyons) at Hanford (A,B,S,T, and U). The CDI is evaluating the feasibility of utilizing the canyons as an asset for disposal of low level wastes instead of being a mortgage liability. The 221-U (U Plant) was selected as a pilot project to determine the final disposition for the canyons. A Data Quality Objective process with the regulators was conducted to identify data needs for the continued evaluation of the canyons under the CERCLA process. The characterization will be conducted in a phased approach: field observation, technology integration, structural sampling, and field sampling. The final end-state of the canyons is required to allow completion of remedial actions and closeout of the 200 Area National Priority List (NPL) site. The CDI is being conducted as a jointly funded project between EM-30, EM-40, and EM-50, and with support from the US EPA and Washington Department of Ecology.

The 200 Area will be a waste management area for the foreseeable future. As such the primary concern with the surplus facilities will be with the protection of the workers and environment. Public access to the 200 Areas is very limited as along as institutional controls remain.
WHAT ARE WE BUYING:

To date through FY02:

The CDI will define the end-state of the canyon facilities in the 200 Area. This will impact the decisions for the ancillary facilities and waste sites within the immediate area of the canyons and could define the overall approach for the 200 Area NPL Site.

Incremental By Year:

FY2002: Obtain record of decision and complete share holder involvement process.

Impact adjusted: Complete feasibility study, complete performance assessment and engineering technology evaluations, and complete record of decision support activities to reach end state decision for U Plant facility.

Regulatory Drivers

TPA, DNFSB, OR CONSENT DECREE DRIVERS: N/A

Regulatory Compliance: The activities are required by the TPA and DOE orders.
After completion of the cleanup activities the area would be in compliance.

Programmatic Driver (Peer Rvw Category): 7

DOE Priority: 250 **PBS #:** RL-WM04 **Unit of Analysis:** 2HJ

UAS Title: Canyon Disposal Initiative (CDI)

Benefits Summary

This unit of analysis (UAS) provides funding to support the completion of the Record of Decision (ROD) for the Canyon Disposition Initiative (CDI). The CDI, formally initiated in FY 1996, calls for analyzing and planning the regulatory path-forward for the long-term disposition of the Hanford 200 Area canyon facilities: U Plant, B Plant, T Plant, PUREX, and REDOX. This analysis is being performed using the Remedial Investigation/Feasibility Study (RI/FS) Process as defined by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) using the U-Plant as the pilot for obtaining the ROD. Funding in subsequent years will fund implementation of the preferred alternative as determined by the ROD, and may initiate CERCLA feasibility studies for the remaining canyon facilities.

Regulatory Drivers

There are no TPA, DNFSB, or consent decree drivers associated with this UAS at this time. However, many of the proposed options for Canyon Disposition could assist (save cost and improve schedule) Hanford in meeting TPA M-91 milestones related to RH mixed low-level waste and CH-large container mixed low-level waste dispositioning.

DOE Priority: 251 **PBS #:** RL-TP05 **Unit of Analysis:** 029

UAS Title: PFP Deactivation

Benefits Summary

This UOA provides for the clean out, deactivation, and dismantlement of the PFP Complex to a clean-slab-on-grade condition by September 2016. Deactivation of the PFP Complex will include terminal clean out (TCO) of plutonium residues and the removal of approximately 600 glove boxes and/or open-faced hoods in the PFP Complex. The work scheduled for FY 2002 includes clean out and disposal of inactive process gloveboxes, contaminated exhaust ducting, and selective deactivation of unneeded facility systems and equipment. Plutonium removed during this work will be transferred to one of the stabilization processes, i.e., Stabilize Residues >30%Pu (UOA 0FC) and Stabilize Pu-Bearing Solids Residues <30 wt% Pu (UOA 0D3).

In FY 2002, the work under this UOA shifts from planning to execution.

There is some mortgage reduction associated with this UOA in FY 2002 associated with the elimination of preventative maintenance of glovebox gloves and exhaust filter boxes. More significant mortgage reduction will be realized as the cleanup of more gloveboxes and related process support equipment occurs in later years.

Each year the stabilization and deactivation projects are delayed results in approximately a $75 Million cost increase to the overall PFP project. That cost is the difference between an average annual cost to maintain the plant minimum safe while performing programmatic work to stabilize/deactivate the PFP complex and the cost when the ultimate minimum safe condition (clean-slab-on-grade, no SNM storage) is achieved.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this activity at this time.

DOE Priority: 252 **PBS #:** RL-TP04 **Unit of Analysis:** 0BA

UAS Title: 300 Area/SNM - Deactivation

Benefits Summary

This UAS in FY 2002 contains activities which are necessary to place the contaminated facilities in a passively safe and environmentally secure configuration and to preserve threat configuration for a minimum of 10 years. This includes the deactivation of all active systems, decontamination, and waste removal to allow for minimum surveillance during that period of time. Also included is the completion of 313 South Building Isolation, which will eliminate the threat of an unsafe roof. The removal of remaining inventory of approximately 1860 Metric Tons of Special Nuclear Materials will also be completed allowing for the final deactivation of 300 Area SNM sub-project.

SIGNIFICANT CHANGES FROM FY2001-2002

There is no funding for this UAS in FY 2001, therefore if funded in FY 2002, there will be a significant increase in the cost of this UAS between FY 2001 and FY 2002.

Regulatory Drivers

This UAS supports TPA Target Milestone MX-92-06-T01.

There are DNFSB or Consent Decree drivers associated with this UAS at this time.

DOE Priority: 253 **PBS #:** RL-TP10 **Unit of Analysis:** 0UP

UAS Title: 200 Area Deactivation Project - 231-Z Min Safe Upgrades

Benefits Summary

This activity allows for completion of Readiness Assessment activities authorizing housekeeping, roof inspection and repair, HVAC system isolation and cell characterization to maintain minimum safe operations.

SIGNIFICANT CHANGES FROM FY 2001-2002

There was no funding in FY 2001 for this UAS, therefore if funded in FY2002, there will be a significant increase in the cost of this UAS between FY2001-2002. FY 2002 costs include characterization work in the process cells and facility ducting to determine radiological and chemical inventories.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree requirements associated with this activity.

DOE Priority: 254 **PBS #:** RL-TP10 **Unit of Analysis:** 02E

UAS Title: 200 Area Deactivation Project - Deactivation

Benefits Summary

FY 2002 workscope contains activities required to complete deactivation of project facilities. These activities are necessary to place the contaminated facilities in a passively safe and environmentally secure configuration and to preserve threat configuration for a minimum of 10 years. This includes the deactivation of all active systems, decontamination, and waste removal to allow for minimum surveillance during that period of time.

SIGNIFICANT CHANGES FROM FY2001-2002

There was no funding in FY 2001 for this UAS, therefore if funded in FY2002, there will be a significant increase in the cost of this UAS between FY2001-2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this activity at this time.

DOE Priority: 255 **PBS #:** RL-TP14 **Unit of Analysis:** 028

UAS Title: 300 Area Revitalization - Deactivation

Benefits Summary

FY 2002 workscope contains activities required to complete deactivation of project facilities. These activities are necessary to place the contaminated facilities in a passively safe and environmentally secure configuration and to preserve threat configuration for a minimum of 10 years. This includes the deactivation of all active systems, decontamination, and waste removal to allow for minimum surveillance during that period of time.

Significant Changes from FY 2001-2002:
Increase in FY 2002 funding due to additional buildings coming into the project.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 256 **PBS #:** RL-TP04 **Unit of Analysis:** 0FA

UAS Title: 300 Area/SNM - Roof Repairs

Benefits Summary

FY 2002 workscope provides for the repair of several roofs within the 300 Area/SNM sub-project. Adequate roofs are one of the pre-established end point criteria required for turnover to the Environmental Restoration Contractor (ERC). Funding this work scope supports the overall project mission to complete deactivation of the 300 Area/SNM sub-project by the end of FY 2002.

SIGNIFICANT CHANGES FROM FY2001-2002

There is no funding for this UAS in FY 2001, therefore if funded in FY 2002, there will be a significant increase in the cost of this UAS between FY 2001 and FY 2002.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree drivers associated with this UAS.

DOE Priority: 257 **PBS #:** RL-TP01 **Unit of Analysis:** 0EK

UAS Title: B Plant Roof

Benefits Summary

This project completed the orderly transitioning of B Plant into a safe and stable configuration suitable for long term surveillance pending final decommissioning. This included the deactivation of the 800 foot long B Plant canyon building and adjoining support facilities to an environmentally secure and stable state. Deactivation of B Plant was completed in FY 1998. Remaining work items were completion of the punch list of activities identified during deactivation for post-deactivation, assembly of facility status documentation, and updating safety basis documentation to reflect the deactivated state. Turnover to the Environmental Restoration (ER) program was accomplished in FY 1999.

This UAS is a placeholder for funding to maintain/repair the B Plant roof per the Memorandum of Agreement between Facility Transition and the ER program.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree Drivers associated with this activity at this time.

DOE Priority: 258 **PBS #:** RL-TP03 **Unit of Analysis:** 0EL

UAS Title: PUREX Roof

Benefits Summary

This project completed the orderly transitioning of PUREX into a safe and stable configuration for longer term surveillance pending final decommissioning. Deactivation of PUREX was completed in FY 1997. Turnover to the Environmental Restoration (ER) program was accomplished in FY 1999.

This UAS is a placeholder for funding to maintain/repair the PUREX roof per the Memorandum of Agreement between Facility Transition and the ER program.

Regulatory Drivers

There are no TPA, DNFSB or Consent Decree Drivers associated with this activity at this time.

DOE Priority: 259 **PBS #:** RL-WM03 **Unit of Analysis:** 087

UAS Title: Solid Waste Facilities Life Extension / Upgrades

Benefits Summary

FY 2002 work scope focuses on general small project upgrades necessary to maintain effective operations for continued storage and/or disposal of onsite and offsite low level, mixed, TRU and TRUM wastes. It provides replacement of capital equipment not related to construction that exceeds its useful life in support of the Solid Waste storage and disposal facilities.

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree directly associated to this UAS.

DOE Priority: 260 **PBS #:** RL-WM04 **Unit of Analysis:** 08B

UAS Title: Solid Waste Treatment Life Extension / Upgrades

Benefits Summary

This unit of analysis (UAS) provides funding to make upgrades to waste processing equipment and computer interface equipment at the Waste Receiving and Processing (WRAP) facility. These upgrades maintain optimum processing efficiency and assist management in meeting throughput goals. It also provides funding to perform limited general upgrades to the T Plant facility

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree directly associated to this essential safety activity. This UAS does indirectly provide support to other Hanford UASs with TPA (M-19 and M-91) and DNFSB drivers.

DOE Priority: 261 **PBS #:** RL-WM05 **Unit of Analysis:** 08A

UAS Title: 200 Area Liquid Effluent Facilities [LEF] Life Extension/Upgrades

Benefits Summary

Projects have been identified to modify the 200 Area LWPF to improve their operation, extend their useful life, or correct certain deficiencies.

Regulatory Drivers

Some of the projects that have been identified are necessary to ensure the continued environmental compliance of the 200 Area LWPF. There are no TPA, DNFSB, or Consent Decree drivers for these projects.

RL FY2002 BUDGET FORMULATION

DOE Priority: 262 **PBS #:** RL-WM05 **Unit of Analysis:** 1JL

UAS Title: 300 Area Liquid Effluent Facilities (LEF) Life Extension / Upgrades

Benefits Summary

Projects have been identified to modify the Liquid Effluent facilities to improve their operation, extend their useful life, or correct certain deficiencies.

Significant Mortgage Reduction Activities

Significant Changes from FY 2001-2002

This activity was unfunded in FY 2001 at the target level.

Connectivity from UAS to PBS End Points

Numerous interim and final end point targets assigned to other projects depend on the availability of Liquid Effluent services. This UAS provides for life extension/upgrades to the Liquid Effluent facilities to ensure their continued operation. The Liquid Effluent Project itself has no interim or final end point targets.

DOE Priority: 263 **PBS #:** RL-WM06 **Unit of Analysis:** 084

UAS Title: Analytical Services Life Extensions / Upgrades

Benefits Summary

This UAS provided upgrades to extend the useful life of 222-S (built in 1951, planned to continue operations to 2035) and WSCF (build in 1993, planned to continue operations to 2046). Activities include safety-related upgrades, compliance upgrades, and replacement of facility systems as required.

Significant changes from FY 2001 - FY 2002.
There are no significant changes.

Connectivity from UAS to PBS endpoints:
This UAS contributes to the accomplishment of the PBS endpoint by providing analytical services for the duration of the Hanford cleanup mission to support other Hanford Projects' endpoints.

Regulatory Drivers

There are no TPA, DNFSB, or consent decree requirements fulfilled by this UAS.

DOE Priority: 264 **PBS #:** RL-TP11 **Unit of Analysis:** 004

UAS Title: Nuclear Energy [NE] Legacy Deactivation

Benefits Summary

In FY 2002, this UAS will remove alkali sodium metals from equipment and systems in the 337 High Bay as part of a continuing process through FY 2005. Removal and disposition of controls and piping associated with the High Temperature Sodium Facility (HTSF) and the Composite Reactor Component Test Activity (CRCTA) will begin. (This activity will continue beyond the end of the fiscal year.) A contract will be initiated for cleaning sodium residuals from the 3718-M sodium tank and the CRCTA vessel. These activities support removal of non-radioactive sodium, which is required before this facility is transferred in FY 2005 for reuse.

SIGNIFICANT CHANGES FROM FY 2001-2002:

This UAS was unfunded in FY 2001 due to higher priority work scope in other Hanford projects.

Regulatory Drivers

TPA Target Milestone MX-92-11-T01, Complete Disposition Options for All Hanford Site Non-radioactive Sodium, is accomplished by this UAS. On the current schedule, this work will complete in FY 2005, approximately 33 months after the milestone due date.

DOE Priority: 265 **PBS #:** RL-TP13 **Unit of Analysis:** 2TK

UAS Title: Emergency Services Equipment - Incremental

Benefits Summary

This UA provides incremental essential equipment replacements for Emergency Services and Preparedness and other related crosscutting sitewide systems. This incremental activity is additional requirements not supported in target funded UA 2PE, "Emergency Services Equipment". The FY 2002 workscope includes replacement of key PNNL Capital Equipment for the Site Personnel Dosimeter Assessment Systems (Standup In-Vivo Counter and Germanium Detectors). This equipment is vital for DOE to meet accountability standards for nuclear facilities workers and unplanned Site exposures.
SIGNIFICANT CHANGES FROM FY 2001- 2002:
This is a new UA for FY 2002 that funds incremental essential safety equipment needs not covered in Target Case UA 2PE. The increase from FY 2001 to 2002 is due to the backlog of equipment replacements completed on a priority basis.
CONNECTIVITY FROM UAS TO PBS END POINTS:
This UA contributes to the accomplishment of the PBS end point by providing timely, cost effective replacement to vital Infrastructure equipment and systems. The activities performed are required to assure the overall Site cleanup mission can be accomplished without major impact.

Regulatory Drivers

There is no TPA, DFNSB or consent decree associated with this activity at this time.

DOE Priority: 266 **PBS #:** RL-TP13 **Unit of Analysis:** 2TJ

UAS Title: Integrated Site Vegetation and Animal Control (ISVAC) - Incremental

Benefits Summary

An integrated approach is being taken to control the spread of radioactive contamination due to biological transport. The FY 2002 scope for this incremental UA includes the necessary capital equipment purchases to provide the safe and cost-effective vegetation and animal control program. The main elements of this program are funded in Essential Safety UA 0MS, "Integrated Site Vegetation & Animal Control (ISVAC)".
SIGNIFICANT CHANGES FROM FY 2001 - 2002:
This is an incremental UA for FY 2002 that funds necessary capital equipment purchases to support the overall ISVAC program that provides the required sitewide vegetation and animal control under UA 0MS.
CONNECTIVITY FROM UAS TO PBS END POINT:
This UA contributes to the accomplishment of the PBS end point by providing timely, cost effective replacement of equipment to support the ISVAC program.

Regulatory Drivers

There is no TPA, DNFSB or Consent Decree associated with this activity at this time.

DOE Priority: 267 **PBS #:** RL-TP13 **Unit of Analysis:** 2TU

UAS Title: L-330, Recycling/Transfer Station

Benefits Summary

BENEFITS SUMMARY
This UA builds a Recycle/Transfer Station, Project L-330, for the separation and survey of sanitary solid waste before final disposal to an offsite landfill or a recycle center. The construction of a Recycle/Transfer Station for processing non-hazardous solid waste is required to assure this waste is surveyed and sorted prior to being taken to a commercial solid waste landfill.
SIGNIFICANT CHANGES FROM FY 2001- 2002:
This is a new UA in FY 2002 and there is no activity in FY 2001 as the construction of this facility is started in FY 2002.
CONNECTIVITY FROM UA TO PBS END POINTS:
This UA contributes to the accomplishment of the PBS end point by providing a safe, environmentally compliant, and cost effective infrastructure to support the Site cleanup mission through 2046.

Regulatory Drivers

There are no TPA, DNFSB, or Consent Decrees associated with this activity at this time.

DOE Priority: 268 **PBS #:** RL-OT01 **Unit of Analysis:** 0V6

UAS Title: Effluent Emission Monitoring (EEM) Program Increment

Benefits Summary

Benefits Summary:
Designation of the stack sampling as a Safety Class (SC-1) component is a safety requirement that was not in the original estimate of the NESAHAP compliance W-420 Stack Monitoring System Upgrades Project.

Regulatory Drivers

TPA, DNFSB and Consent Decree:
There is no TPA or Consent Decree associated with this activity at this time.